

Motivation and Grammatical Accuracy in a Web-based High School Spanish Class: Is
There a Relationship Between Attitudes and Linguistic Outcomes at the Secondary
School Level?

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By

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Special thanks to Dr. Ronald Leow, Susan Manly and Randy Bass for your expertise
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Many Thanks,
Gina Deanne Dyson

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ABSTRACT

This study researched the pre and post effects on student motivation and grammar performance of high school students enrolled in a partially web-based Spanish course. A 39-question survey administered before and after exposure investigated the attitude toward school, Spanish and computers of 42 high school juniors and seniors taking an upper level Spanish course online. Additionally a three-question essay test was administered before and after exposure to determine grammar ability. It was found that no significant changes in motivation occurred over the course of the semester, although small significant changes were found within specific populations. Grammar performance improved significantly over the course of the semester. Additionally, student self-reports indicate that the benefits perceived include non-traditional skills such as improved time management, working at one's own pace, independence and improved computer skills among others.

Introduction

Distance education courses have continued to evolve from their inception. In the beginning, many courses were offered via radio, phone, television and one and two way interactive video to name a few. The most recent entry into the delivery category is web-based distance education. Here, classes are offered via the World Wide Web where students can read coursework, join discussion boards, email, listen to audio and watch video curriculum all from the computer. Universities around the world have been implementing and upgrading course delivery systems and offerings for years. Web-based distance education courses at the secondary school level, however, are just beginning to appear in our nation's public schools. As schools increasingly turn to technology as a valuable tool for education delivery, distance education has become an increasingly popular tool of choice in the K-12 sector. Over 900 school districts use web-based courses in some capacity across the country¹. Research and development on and at the secondary school level must increase and be continuous to determine how new technologies help facilitate student learning and motivation to learn.

Why are secondary public schools experimenting and creating these courses for their students? This answer lies at the center of the debate over improving public education and educational technology's role in that improvement. Educators, administrators, policy makers and politicians are constantly trying to find the magic formula that will create high-achieving, highly motivated students in an effort to raise our public school performances into the world's elite. With the explosion of computers

and the Internet over the past ten years, technology has slowly made its way into the classroom. Many in education believe that integrating technology into schools will be an invaluable addition to the current education make-up. Technology, many believe, will not only help students achieve higher test scores, but also provide motivation for studying and learning the curriculum and help to foster and develop skills that America's twenty-first century workforce is demanding our students come equipped with as they leave high school. These 21st century skills, developed by esteemed educational organizations such as the North Central Regional Education Laboratory (NCREL) and the CEO Forum on Education and Technology include digital age literacy skills, higher order thinking skills, effective communication and high productivity to name a few².

Outcomes and assessment of these web-based courses need to be examined and on-going research must be conducted to determine their pedagogical effects on student learning. If public education is to spend billions of dollars on technology, while potentially bypassing other curriculum tools (textbooks, for one), detailed research should demonstrate how students are using the new mediums to facilitate learning and how this use manifests itself into the acquisition of basic skills, 21st century skills and motivation.

¹ From Blackboard, Inc.

² North Central Region Education Laboratory (NCREL), in an effort to develop a comprehensive and definitive list of 21st century skills, has launched the EnGauge project, which builds on and synthesizes the work of the United States Secretary of Labor's Commission on Achieving Necessary Skills (SCANS), The International Society for Technology in Education (ISTE), American Association of School Administrators (AASA) and the National Academy of Sciences, to name a few. A complete list can be found at <http://www.ncrel.org>

All secondary school subjects have a stake in learning and motivation research. One area in particular that has seen a surge of articles re-examining the relationship of motivation to learning is the language-learning field. Particularly, motivational aspects of learning with computers have produced common, repeated themes that computer-assisted instruction includes a) the novelty of working with a new medium, b) the individualized nature of computer-assisted instruction, c) the opportunities for learner control and d) the opportunities for rapid, frequent, non-judgmental feedback (Warschauer, 1996a). However, as Warschauer points out in the same article, much of the research of the motivating effects of computers and technology gets outdated very quickly as newer technologies replace the old ones. New technologies allow new ways of using computers in the classroom and thus new ways of motivating students and must be examined (Warschauer, 1996a). Web-based classrooms have great potential by combining many features into a powerful new medium of interaction “in the classroom”. Web exchanges on the computer takes place in a text-based form that is easily transmitted, stored, re-evaluated and can be rewritten (Sengupta, 2001).

A relatively new addition to web-based courses has been the emergence of foreign language courses. Foreign language acquisition consists of reading comprehension, speaking and writing. Little is known on the language learning outcomes of Web-based classrooms at the secondary school level, therefore it is important to try and understand the effects of Web-based pedagogy for the perspectives of the learners (Sengupta, 2001) as well as the academic outcomes after treatment.

Additionally, very little motivation studies have examined student attitudes before and after they were exposed to the technology.

The 1980's and 1990's have seen a shift toward communicative language teaching, which emphasizes student engagement in authentic, meaningful interaction (Warschauer & Meskill, 2000). Toward this end, integration of Computer Mediated Communication (CMC) into language classrooms has increased as educators see the potential for a greater quality of language learning. Initial research has examined learning outcomes from CMC integration (Conelios & Oliva, 1992; Beauvois, 1994; Chun, 1994; Kern, 1995; Sullivan & Pratt, 1996; Warschauer, 1996; Lee 1998; Nix, 1998; Nutta, 1998; Van Handle & Corl, 1998; Warschauer, 1998 among others) as well as motivational outcomes from using computers for writing and communication (Warschauer, 1996; Lee 1998, Beauvois & Eledge, 1995 1996, Agarwal & Day, 1998; Smith 1992; Sengupta, 2001; Nagata, 1998 and others). A CMC structured class may have important effects for student motivation because it allows students to construct and produce their own knowledge, making them active, not passive in obtaining knowledge. This ability to produce knowledge, to produce language, as is this case, at a greater rate than passively obtaining it in a regular classroom, can have a positive effect on grammar acquisition as well. Swain (1985) has looked extensively at the roles of input and output on second language learning. She has come to believe that producing the language, as opposed to simply comprehending the language, can force the learner to move from semantic processing to syntactic processing, thereby facilitating more grammatical competence.

This study examines the potential correlation between student attitudes and linguistic outcomes of high school students taking a partially web-based foreign language course. More specifically, my thesis examines student attitudes and writing ability, specifically grammatical improvement before and after engagement in “Español Virtual”. Additionally, a determination will be made as to whether there are relationships between these linguistic outcomes on the one hand and self-reported attitudes and perceived benefits on the other.

Literature Review

Theoretical Foundations

Motivation

The attribution theory states that our beliefs about what causes and influences our behavior have a marked impact on our expectations and, thus, our motivation. The theory examines how people make causal explanations and how they deal with the information they use in making causal inferences, and with what they do with this information to answer causal questions. The theory developed within social psychology as a means of dealing with questions of social perception. One of the originators of the theory, Fritz Heider, believed that people act on the basis of their beliefs. Therefore, beliefs must be taken into account if psychologists were to account for human behavior. This would be true whether the beliefs were valid or not. Attribution theory describes the processes of explaining events and the behavioral and emotional consequences of those explanations (Ross & Fletcher, 1985). Weiner (1985) and others, applying the

attribution theory to education, emphasize that students' perceptions of their educational experiences generally influence their motivation more than the actual, objective reality of those experiences. For example, a history of success in a given subject area is generally assumed to lead one to continue persisting in that area. However, students' beliefs about the reasons for their success will determine whether this assumption is true.

The social cognitive theory described by Albert Bandura states that there exists a reciprocal determinism when it comes to learning, specifically, behavior causes one's environment, but just as important, one's environment influences behavior. Additionally, an accomplished performance (demonstrating knowledge or learning for example) requires self-efficacy. Self-efficacy is the conviction that one can successfully accomplish the behavior required to produce a particular outcome. It is a judgment about how well one can organize and implement effective strategies in a situation that may include novel and often stressful elements. A response-outcome expectancy is the belief that a particular behavior will lead to certain-outcomes. An efficacy expectation is the belief in one's capability to execute the required behavior successfully. (social recognition, applause, trophies, and self-satisfaction--outcome expectations); belief in abilities is an efficacy judgment, a self-judgment of one's capabilities (Bandura 1986).

Constructivism

Inspired by Piaget's work in developmental psychology and the research of John Dewey and Lev Vygotsky, constructivism is based on the theory that people, particularly young people, learn by doing, rather than observing and that there are multiple ways of obtaining knowledge as there are multiple ways in which people think and learn. This process of active learning consists of effort, observation, interpretation, articulation, hypothesis generation, testing, re-evaluation and reflection until comprehension is demonstrated. Constructivism often utilizes collaboration and peer criticism as a way of provoking students to reach a new level of understanding; a teacher's role is best as a facilitator of the process, not as a transmitter of all facts and data. (Maurer 1998)

Computers and Learning Development Based on the Notion of Constructivism

Constructivism provides an appropriate framework for educational technology. Based on the research of Seymour Papert (Co-founder of MIT's Artificial Intelligence and Media Labs, professor of Media Technology at MIT, and one of the world's foremost experts on the impact of computers on learning) and others, we are learning that computers are an appropriate medium to support active, interactive, and self-directed learning. Technology can allow students to work out their own learning strategies, develop different learning styles, express themselves and not only demonstrate, but also use their new knowledge in many different ways. Computers and the Internet facilitate constructivist practices by providing a medium for discovery and exploring larger worlds and giving students autonomy in using knowledge. Learning in a computational environment provides a context for learning in which there is an

empowering sense of a student's own ability to learn anything he or she wants to know, with the gusto we only use to see when they played video games. The potential exists to bring back an enthusiasm for learning by shaping education to fit each student's approach to learning (Papert & Harel, 1991).

Papert believes that the fundamental fact about learning is that anything is easy if you can assimilate it to your collection of models. The understanding of learning must be genetic, it is internal; it comes from a personal, passionate interest. The "laws of learning" must be about how intellectual structures grow out of one another and about how, in the process, they acquire both logical and emotional form. Purpose is the key here. A computer's essence is its universality, its power to simulate. Because it can take on a thousand forms and can serve a thousand functions, it can appeal to a thousand tastes. Computers, as a medium, are flexible enough so that people, especially young people can each create for themselves something that is emotionally and intellectually stimulating (Papert, 1980).

The Internet, as a code word for connectivity, is a radical transformation. Creating collaborative learning communities with students in one's own class and students from around the country and around the world can have a qualitative difference in their development. (Papert, 1996)

Computer-Mediated Communication and Learning

Looking specifically at a type of computer technology, Computer Mediated Communication (CMC) is the name given to a large set of functions in which computers

are used to support human communication. CMC applies to many different kinds of electronic communication including e-mail (asynchronous), forums (discussion boards), messaging (synchronous) and documents (this includes online documents available for accessing, storing, modifying and printing) (Murray, 1988). The focus for its use in a classroom context is on the use of computer systems and networks for the transfer, storage, and retrieval of information among students, teachers and others. Such uses in the classroom include word processing, E-mail, discussion boards, etc.

There are three broad categories of CMC functions: Direct human-human communication, or conferencing services (E-mail, discussion boards, listserves, messaging), Information (word processing, curriculum stored on the web, Internet resources), and Computer Assisted Instruction, where the computer structures and manages both the presentation of information and the possible choices available to the human user (Berge & Collins, 1995 and Salaberry, 1996)

Many believe that CMC is changing instructional methodology in two main ways: generating improved technological tools to use a full range of interactive methodologies, and more important, by focusing teachers' perspectives on the appropriate learner-centered design of instruction (Berge & Collins, 1995).

Additionally, by providing additional possibilities to receive input and produce output in the foreign language, communicating through the electronic medium can establish a rich context for language development to occur. The text-based nature of the language produced through CMC offers additional advantages for language learning by making

the written performance available for detained revision and, hence, further learning (Gonzalez-Bueno, 1998).

Motivation and Educational Technology

Lepper has extensively researched the link between computer use in the classroom and motivation. He and his colleagues have suggested that using computers is motivating for many reasons. Computers in the classroom increase challenge and user control, key components in determining intrinsic motivation. Computers can increase curiosity, a key component in looking at human motivation in terms of information processors. Additionally, computers increase feedback and sustained attention and allows for the personalization of one's work, all factors that have an impact in adolescent motivation (Lepper& Malone 1987).

Schofield (1997) reports that one of the most common and consistent findings of studies on the affective impact of computer use in classrooms has been an increase in motivation and closely related constructs such as interest and enjoyment of schoolwork, task involvement, persistence, time on task and retention in school. Focus has turned to social and affective aspects of computer use in the classroom (as opposed to directly examining student achievement) because classroom social processes can directly affect learning outcomes.

Kinzie, Sullivan & Berdel (1992) found higher continuing motivation for a learner-controlled Computer-Assisted-Instruction (CAI) versus a non-learner controlled CAI program. Two groups of ninth graders received different versions of CAI in

science. One group used a learner-controlled version that allowed students to have control over the review materials. The other group used a version in which the program automatically determined when to review material. The student's decisions about which version to use during a subsequent session indicated significantly higher continuing motivation for the learner-controlled version.

SIIA's 2000 Research Report on the Effectiveness of Technology in Schools has found educational technology to have positive effects on student attitudes toward learning and on student self-concept. Several studies reviewed have found students felt more successful in school, were more motivated to learn and had increased self-confidence and self-esteem when using computer-based instruction (SIIA, 2000).

Osuna and Meskill (1998) investigated the role of the WWW as a tool to increase motivation and cultural awareness of the Spanish-speaking world. Students enrolled in the first quarter of Basic Spanish were instructed to utilize the web to complete five activities that expanded on the aspects of culture studied in class. A post-activity assessment questionnaire accompanied each activity. On completion of all five activities, students also completed an additional survey to provide a comprehensive view of integrating language and culture through use of the WWW. Eighty-five percent of subjects indicated enjoyment using the web on the post-activity assessments, and by the end of the study, the survey administered after all activities were complete found that 100% of respondents enjoyed using the web in their course because it made for a more interesting class. 100% of respondents also felt they had learned more Spanish by doing web activities. These findings suggest a direct relation between satisfaction &

level of interest. Additionally, once having completed an assigned task, one third of the subjects returned to the sites on their own, reinforcing the findings of positive student attitudes towards the web and possibly an increase in their motivation to learn.

Motivation and Grammar Acquisition

Nagata (1998) used computer software to provide comprehension and production tasks to L2 Japanese learners. The study examined the effectiveness of the tasks in the acquisition of Japanese honorifics and also examined learner's attitudes and perceived benefits toward the computer software with a motivational questionnaire. The results indicate that students in both the comprehension test group and the production test group had positive attitudes about the software program and the amount of learned from the program (4.4 for the comprehension group and 4.6 for the production group out of 5 respectively). Task results showed that both groups scored high on comprehension and production tasks (92.4, 72.3 for the comprehension group, 95.2, 85.4 for the production group) while overall findings suggest that given the same grammatical instruction, output-focused practice is more effective than input-focused practice of the development of skill in producing Japanese honorifics and is equally effective for the comprehension of these structures.

Computers/Distance Education and Language Learning

The use of instructional materials based on on-line technologies offers many innovative ways of engaging students in language acquisition. The Internet provides a

student-centered learning environment in which students receive input on their own time and on their conditions through on-line readings, lectures, etc and produce output via Computer Mediated Communication in the target language (Lee, 1998).

Additionally, electronic communication can create a non-threatening atmosphere in which students can express, negotiate and interpret meaning within a meaningful context (Beauvois, 1994). The use of on-line communication provides an individualized, interpersonal, and interactive environment, which allows students to gain active learning experience beyond those of a traditional classroom (Lee 1998).

Glisan ET. al. (1998), in a study of a Spanish foreign language distance education class with two elementary schools in Pennsylvania, examined how much students had achieved a *comprehension* of oral Spanish (knowing what they heard) and *production* of words and phrases (speaking ability) over the course of a semester using video conferencing as the method of delivery. At both assessment points (March and May) students posted high scores in comprehension and production (78%,72% respectively in March and 65%, 62% respectively in May). Results indicate that distance education can help students learn Spanish although students scored higher when review activities were conducted with on-site teacher (this reflects the March results).

Silver and Repa (1993) found that ESL high school students who used word processing software in combination with a developmental learning sequence on the writing process evidenced higher quality writing than students receiving equivalent instructional without word processing.

Computer-Mediated-Communication and Writing

CMC is beneficial to writing because, as Warschauer (1997) explains, CMC allows, for the first time, human interaction taking place in a text-based form. Additionally, this computer-mediated form can be easily transmitted, stored, archived, re-evaluated, edited and rewritten. Students' interactions can now become a basis for epistemic engagement. The interactional and reflective aspects of CMC merge speech and writing together, which can allow for an entirely new way of learning.

CMC can provide more practice, facilitate different writing styles and encourage students to expend more effort into producing written language. Additionally, one of the outcomes found of CMC, is increased participation in the activities that make up the writing process. CMC can change the whole discussion and writing process by allowing for a moderation of ideas, phrasing and re-phrasing of thoughts before expressing them and can allow for attention to individual learning styles (Beauvois, 1994). Using CMC as the primary source of class communication will mean that writing will be emphasized and constantly a part of the educational experience in the classroom. The prominent role of writing in a CMC based class may have a profound impact on the writing abilities of students and learning in this area may be enhanced. (Shimabukruo, 1995)

CMC provides great interest and great curiosity to the language learning community because of its ability to combine both the oral and the written word. It has been called a hybrid that resembles both speech and writing, yet is neither (Ferra,

Brunner, Whittemore, 1991). Many studies that have looked at CMC and student learning have focused on the effects on oral proficiency as CMC is so often linked to oral rather than traditional writing. CMC, through its synchronous and asynchronous nature, is conducive to less formal language, rapid responses, and conversational style writing that often represent the spoken word rather than the written word. Because CMC in the classroom often focuses on content, rather than form, studies have often concentrated on oral proficiencies in students (Chun, 1994, Kern 1995). However, by its definition, CMC does involve writing on many levels and of interest is whether CMC increases, decreases or has little effect on levels of grammaticality or general linguistic sophistication (Baron, 1984).

Warschauer (1998) believes that computer-mediated interactional writing provides the benefit of noticing. He has found that computer-mediated communication allows greater noticing than oral communication. Students noticed words on the screen (written by others) that were so common but which they had never "caught" before in oral conversation. After such words were "noticed" the first time in writing, many were able to try them out, and from then on these words were noticed regularly, both orally and in writing.

Wang (1993) explored the effectiveness of dialogue journal writing between university level ESL students in an intermediate reading and writing class and their instructor via e-mail. Two groups of students wrote dialogue journals to their instructor using either paper and pencil or email. The analysis of the data revealed that the e-mail students wrote more per writing session than did the paper and pencil students.

Cononelos and Oliva (1992) used an electronic bulletin board called NEWS on the Internet network with an advanced Italian-language course. Students could write to and response to native speakers about Italian society and culture. The students all believed that their writing improved as a result of having communicated through the network. The instructors felt that the feedback gained by the students from responses of native speakers who are not language teachers, but share with the students a common area of interest, was an important factor in improving the students' writing.

Sullivan and Pratt (1996) compared students in two ESL writing environments; a networked computer-assisted classroom and a traditional oral classroom during a fifteen-week semester. Using a pre and post writing test, the students' writing quality was examined. Results showed that writing quality did improve in the computer-assisted classroom significantly more than writing quality in the traditional classroom.

Nix (1998) found that 4th graders who had been exchanging e-mail regularly with partners at another school performed better in persuasive writing tasks both on & off the computer than students who had not been using e-mail. Using technology in this educational context, appears to transfer to subsequent hand written essays.

Tella (1992) conducted an ethnographic investigation of a semester-long exchange between high school students in Finland and England. Among the results cited include many findings about the writing process of one or both classes. Rather than writing their compositions only once, as was required, the Finnish students naturally edited and revised their compositions, poems, and other messages to make them appropriate for their English peers. In addition, instead of writing most of their

compositions and other work alone, they increasingly made use of peer tutoring and other collaborative methods for writing help. The quality of writing improved as writing changed from teacher-sponsored and led to real-purpose writing with genuine audiences. Additionally, the modes of writing became more versatile, including not only the narrative and descriptive genres usually found in regular class, but also personal, expressive and argumentative use of language.

There has been debate that forms of CMC, especially e-mail, does not help L2 learners in writing ability because the nature of such writing is more orally based than written based. Biesenbach-Lucas and Weasenforth (2001) attempted to show email as a questionable avenue for improving academic writing skills. They studied two university intermediate ESL classes; each student had to write assignments using e-mail and a word processor. They found, however, no obvious differences between e-mail and word-processed writing when the normalized averages for each feature were measured. This indicates that CMC, at the very least does not present a detriment to writing skills and may help to improve abilities as a part of the overall instruction.

Warschauer (1998) describes Pellettieri's study of the modifications that took place during synchronous electronic discussion board postings between pairs of intermediate Spanish students. Pellettieri found that because students had more time to process language and view their writing as they produced it in an electronic communication, in contrast to face-to-face oral communication, they were more likely to monitor and edit their messages. The author believes this can result in enhancing language acquisition more than in a non-electronic environment.

St. John and Cash (1995) found that electronic communication between second language learners enhanced writing and comprehension skills by reading messages and correcting writing skills accordingly. The authors used linguistic analysis and learner self-reports of a six-month e-mail exchange between a high-intermediate learner of German and a German native speaker. The learner systematically studied the new vocabulary and phrases that he read in his incoming e-mail and stored the e-mail messages for later study and use. When he wrote messages back, he reviewed the past messages and made special effort to put to use the new vocabulary and phrases, a process that the authors claim dramatically assisted his language learning. Through this process, he was able to correct many of his early mistakes and incorporate and learn a great variety of lexical items, idiomatic expressions, and pragmatic and syntactical devices. The authors found that by the end of the six months, great progress had been made at the syntactic level, with the learner using more complex structures, longer sentences, more correct word order, and "more natural German"

CMC and Grammar Acquisition

The use of CMC can provide an increase in the time for reflection, grammatical complexity, and logical coherence. Even though these characteristics are shared by other written modalities, when students utilize dialogue journals through the interactive medium of e-mail, the result is a more natural-sounding conversational style (Gonzalez-Bueno, 1998).

Many studies that have looked at grammar acquisition in computer-mediated-communication have very often taken the position that they would not expect any change or at best would find minimal grammar improvement because of the reduced emphasis in focus. Chun (1994) found that conducting class discussions on a computer network is an effective method for increasing the interactive written and oral competence of first-year foreign language learners because it provides students with the opportunity to generate and initiate different kinds of discourse. However, Chun believes that the true benefit of computer mediated class discussion is the sociolinguistic and interactive competence, not grammar accuracy because such discussion is discourse based and focused on the ability to perform different speech acts and to negotiate meaning. Looking at first and second semester German students, Chun found that students interacted directly with each other, took the initiative in asking and responding to questions, constructing and expanding on topics and took more of an active role in discourse management than is typically found in normal classroom discussion.

Kern (1995) described the use of a local area networked computer session to facilitate communicative language use through synchronous, written classroom interaction. The study compared the quantity and characteristics of the discourse produced by two groups of second-semester French students during a networked computer interaction session and during oral class discussion on the same topic. Students went to a computer lab one day every two weeks during their regular class period, for a total of seven sessions. The data found that students had twice as many

turns, produced two to four times more sentences, and used a much greater variety of discourse functions (greetings, establishing contact and assertions for example) when working in the networked computer session than they did in their oral discussion. An attitude survey revealed that 80% of students felt that having the time to compose messages in the networked computer environment allowed them to feel more confident about participating and 78% felt that the networked computer environment improved their ability to write in French. Although Kern found in his networked group enhanced student participation and a greater variety of discourse functions, the same group devoted less time to grammatical accuracy. This finding, which did result in overall decreased grammatical accuracy was believed to have happened because the emphasis was taken off form and put onto content. The urgency of the synchronous mode demanded that the student pay less attention to formal accuracy.

Nutta (1998) compared postsecondary English as a Second Language (ESL) students' acquisition of selected English structures based on the method of instruction—computer-based instruction versus teacher-directed instruction. The results showed that for all levels of English proficiency, the computer-based students scored significantly higher on open-ended tests covering the structures in question than the teacher-directed students. No significant differences were found between the computer-based and teacher-directed students' scores on multiple choice or fill-in-the-blank tests. The results indicate that computer-based instruction can be an effective method of teaching L2 grammar.

Gonzalez-Bueno (1998) studied the effects of email on Spanish L2 discourse. Observing 50 university students in a L2 beginning class using email dialogue journals, the author found that most of the students in the study took their time to consult references and edit their messages before sending them out, resulting in greater grammatical accuracy and coherence of ideas. Although, a decrease in the relative grammatical accuracy was observed towards the end of the two-semester study in students who had gained additional confidence in their use of the language and wrote longer messages about more varied topics. In addition, the author found that an enhanced quality of participation and a greater capacity for time and space management were characteristics identified as being more beneficial in the electronic format than in the paper-and-pencil-format.

Process oriented research into grammar acquisition can provide insight into the types of digital tools that can best be used in the language classroom. Collentine (2000) utilized a grammar slide show incorporating many different kinds of speech delivery (aural, textual and video) and a user-behavior tracking technology to determine which aspects of the instruction contributed to grammar improvement, if any, for 40 third-year university-level L2 Spanish students. He found evidence to support the long-held claim that access to multiple perspectives of indirect speech is beneficial for grammar acquisition. The incorporation of aural, textual and video materials provided alternative perceptual perspectives of textual data in instruction that were associated with improved grammatical performance.

Motivation and Computer-Mediated-Communication

Research into CMC suggests that having students communicate via E-mail and other forms of electronic communication creates a need and a motivation for language practice. Students seem to enjoy communicating in the target language when sending or receiving messages. Using electronic communication encourages the learners to put to use what they are learning by maintaining a dialogue with their peers, free from the stressful, and often non-communicative environment of the classroom (Beauvois, 1994)

Warschauer (1996a) researched the effects on student motivation of using computers for writing and communication in the language classroom. A 30-question survey investigated attitudes toward using computers of 167 ESL and EFL students in 12 university academic writing courses in Hong Kong, Taiwan and the U.S. Factors that influence students' positive attitude toward computers include the benefits of computer-mediated communication, the feeling of personal empowerment, and the enhancement of learning opportunities. Another possible factor is the achievement (and sense of achievement) which learning to use computers can help bring about.

Lee (1998) investigated on a combination of Internet tools, CMC, specifically, chatrooms and on-line newspapers to see if they helped improve students' writing, speaking and collaborative learning skills. The study incorporated on-line activities as regular class assignments in the course. Written work was scored separately based on five categories: content, organization, language, style and appropriateness. Included in the study was a student attitude questionnaire, administered at the beginning of the semester, examining attitudes toward using Internet technology and Internet tools. A

second survey, examining the student's experience with online activities, was administered at the end of the semester. Results from the pretest indicate that more than 50% of students agreed that it was important to be able to use the Internet and that overall, students had a positive attitude toward the Internet and were interested in using it to learn the target language. The results of the posttest showed that CMC heightened students' interest and motivation for learning the foreign language and that most found the on-line activities to be helpful in enhancing their development of language skills. More than half of the students agreed that on-line chatrooms helped them improve their writing in Spanish and that they would like to continue using the Internet in the future. The evaluation of students' on-line writing showed that they used a variety of strategies and discourse markers such as "by the way", "anyway", "however", and "on the other hand" to express their ideas and support their opinions. As a result of semester-long practice in writing the target language in the CMC environment, students' writing and speaking skills both improved indicating support for the theory that those who write more frequently in the second language write better.

Warschauer (1996b) conducted a study that compared the equality of student participation in electronic and face-to-face discussion. The findings showed not only a tendency toward increased and equal student participation, but found that students used language that was lexically and syntactically more formal and complex in the electronic discussion than in face-to-face discussion. Attitudes were also looked at as indicators of trends and found that students reported feeling that they could express themselves freely, comfortably and creatively more during electronic discussion; also they reported

that participating in electronic discussion assisted their thinking ability and they did not feel as much stress as during face-to-face discussion.

Beavois and Eledge (1995 1996) describe the results of a pilot study to examine the attitudes of university students toward the use of computer-mediated communication in their French Conversation and Composition course. Student perceptions are examined in the light of their personality types as determined by the Myers-Briggs Type Indicator (MBTI). Quantitative and qualitative data validate that both I (introvert) and E (extrovert) personality types generally perceive the use of LAN (local area network) as a beneficial experience.

Van Handle & Corl (1998) studied an e-mail exchange between two collegiate intermediate level German classes to determine improvements in students' writing in German. Students in these classes participated in an asynchronous e-mail discussion in which they all read the same texts and then reacted to them by sending written comments via e-mail to both classes. Instructors noticed demonstrably better compositions that benefited from the additional communicative opportunities. Additionally, the students agreed on the value of the motivational benefits that the expanded learning community created for all students.

Beauvois (1994) looked at the affective results of real-time computer networking on student communication in the foreign language classroom. Results indicate that CMC is an effective motivating force. The study included four computer lab sessions in which the resulting electronic discussion was examined for patterns of discourse as well as for quantity and quality of student messages. Pre and post attitude

surveys were administered to examine student attitudes toward learning a foreign language on a real-time electronic network, to examine the students' relationship to their learning processes and to identify the linguistic benefits, if any, of this kind of LAN intervention to second language learning. Only two items were asked both on the pre and post study instruments. The pretest consisted of questions illustrating student attitudes about language learning in general. The posttest survey focused on classroom stress, participation, student perceptions of learning, error correction, and group interaction. The lab exercises appeared to be a stimulant of free and abundant student participation in target language discussion. The surveys indicated that over 70% of the students agreed that using the LAN to communicate with one another was not stressful and facilitated self-expression. The computer lab was described as much less anxiety producing than the regular classroom in which they felt "on the spot" and nervous when called on to participate. 73% indicated that they would like to spend more time working in the lab. 88% gave a strong positive response to using the LAN for discussion with classmates. Ninety percent of the students disagreed with the statement: "I did not learn very much from working on the computer" while 71% agreed that they had improved their ability to read French. The author suggests that it is apparent that working in the electronic communication environment encourages a large amount of language use and thus promotes confidence in the learner. As for grammatical accuracy, 85% indicated that it was very helpful to have the printout of their writings to note errors made. The author believes that this delayed error correction helped focus students' attention on their own errors after the fact, when they were more likely to monitor their expression

without the stress of immediate teacher intervention or communicative time constraints. Post-semester interviews found a unanimous student perception of increased use of the target language and an increase of output over the normal classroom. All students attributed high output to the fact that they had time to reflect before writing, i.e. control over the output. Students also felt confidence in their grammatical abilities because they were able to take the time to monitor their use of grammar to better express their ideas. The author's found, in general, attitudes ranging from simple enjoyment to expressions of strong enthusiasm for CMC. The results suggest that CMC in the teaching of language has a positive effect on student production of the target language and attitudes toward communication via the network; thus lending support to an emerging impression that this environment can enhance the second language learning experience.

Agarwal and Day (1998) studied students in a partially web-based microeconomics course. Students in the class complete web-based projects and received answers to questions about course material via a class e-mail list, while students in a control class completed similar project assignments without reference to the Internet. On motivational questionnaires given, students in the Internet course “expressed a significantly higher likelihood of attending a lecture given by an economist, were more likely to consider economics as their favorite subject, used economic concepts to analyze situations more frequently and disagreed about finding economics dull.”

Smith (1992) investigated student attitudes after completing courses that took advantage of a computer-based telecommunications network. The purpose of the network was to make it easy for students to submit assignments and to communicate with their instructors and other students. Courses that incorporated the network received higher overall evaluations and higher instructor ratings than did their traditional course counterparts. Nearly 3 out of every 4 students in the networked group rated response time, ease in doing assignments, quantity of feedback, quality of course and their overall experience as better or much better than past courses without online computer interaction.

Sengupta (2001), in an effort to understand the effects of Web-based pedagogy from the perspective of the learners, examined the nature of peer exchanges in two partially network-based classes of ESL students. The data indicates that students, through the Web classroom conversation, used two dominant moves, agreeing and praising in their discourse, which suggest the students were learning to use language as a means of setting social norms for the benefit of the online community created. The exchanges also showed the process of learning within a community where each participant was helping the others. Follow up interviews were conducted, which found that students developed a sense of personal accountability because all students could see their work, resulting in a need for quality responses at all times. Students also viewed the Web-based exchanges as a new way of learning because it was a highly valued new kind of peer response; an ongoing dialogue sustained over 14 weeks that was archived and available to revisit at any time.

Sherry and colleagues (2001) gave pre and post motivation surveys to 165 K-12 students in nine different public schools in Vermont and had teachers assess the same students' final school projects by using a 1-4 rubric scale to determine metacognition and thinking and learning processes (specifically, inquiry learning and application of skills). These project scores were later re-scored by others to increase reliability. The purpose of the study was to assess the impact of The WEB Project, a five-year Technology Innovation Challenge Grant that was completed in late 2000, in which standards-based instruction was infused with online technologies and multimedia. Four separate simplified path analysis models were tested and results showed that motivation was related to metacognition, metacognition was related to both inquiry learning and application of skills, inquiry learning was related to the student process outcome, and application of skills was related to the student product outcome. The significant correlation between motivation and metacognition indicates that students' enthusiasm for learning with technology may stimulate students' metacognitive (strategic) thinking processes.

Research Questions

- What are student attitudes and perceived benefits of taking a web-based language course?
- Is there any change in attitudes and perceived benefits after one semester?
- Does the implicit presentation of grammar promote grammar improvement when curriculum is delivered via the web?

- Are there relationships between attitudes and perceived benefits on the one hand and linguistic outcomes on the other?

Background of School District

Poway Unified School District is a member of the Western States Benchmarking Consortium, a group of seven school districts that have come together to implement organizational policies and practices that have been linked to improved student learning. Their research has led them to believe that targeted efforts in certain broad strategic areas can provide significant leverage in improving student performance. These strategic areas are 1) Student Learning 2) Capacity Development 3) Learning Community Development and 4) Data-Driven Decision-Making. Key behavioral and support indicators have been identified within these strategic areas. These indicators include: incorporating innovative practice, integrating technology, promoting innovation, providing community-based learning opportunities and using data to affect student performance, to name a few.

In addition, the Consortium has also developed four stages of development to aid in assessing an organization's development along the continuum of improvement as it relates to each of the aforementioned strategic areas of focus and indicators. These stages are: Emergent, Islands, Integrated and Exemplary, where Exemplary describes a school system that demonstrates unusually high levels of student and organizational performance. It is constantly pushing the envelope and monitoring future trends within

and outside the community to determine where new policies, practices and paradigms might be headed in the future.³

The Spanish levels developed by the School District are as follows:

8th grade: Spanish 1 (fall) and Spanish 2 (spring)

9th grade: Spanish 3 and Spanish 4

10th grade: Spanish 5 and Spanish 6

11th grade: Spanish 7 and Spanish 8

12th grade: Spanish 9 and Spanish 10

Participants

Participants were 42 junior or senior high school students (25 girls, 17 boys) taking one of two identical sections of Spanish 7—Español Virtual (upper level, not AP) taught by the same teacher at Mt. Carmel High School in Poway, California. All participants had a computer at home.

Spanish Course

Spanish 7—Español Virtual is a web-based course delivered partially on-line. During the week, participants were responsible for reading or listening (depending on the lesson) to the weekly lessons/lectures posted on the course site. Weekly assignments included online exercises (turned in via email), studying vocabulary, posting to the discussion board, writing a “keypals” letter (e-mail penpal), and completing conversation time. Participants also had to keep up with updates and reminders posted both on the course site and sent via email.

³ From: A guide for using consortium benchmarks, Western States Benchmarking Consortium.

Participants were required to sign up for an online keypal through mightymedia.com. Some participants had international keypals, other found it more difficult to maintain contact with one and instead wrote to another online participant. Participants were required to write one letter a week, it had to be at least six sentences long and include the grammar specified by the teacher that week (from the lectures posted on the course site). The teacher received a copy of the letter and each letter was rubric scored (1-5) and then returned.

For the weekly discussion board postings, participants had the choice of 1) beginning a discussion by posing a question, statement or paragraph; 2) respond to a posting listed; 3) pose a grammar/writing problem in English to solicit help from other participants; or 4) respond to a student's grammar inquiry (In English). Participants would get weekly credit for posting to the discussion board once and any additional postings for that week would be given towards class participation.

The teacher required participants to attend class once a week to practice oral speaking skills, review or introduce difficult concepts or take tests. Participants were also required to speak with a fluent Spanish speaker once a week for an hour outside of class and have a parent/guardian sign off on their assignment.

Participants were given in-class weekly vocabulary quizzes. Unit tests were given every 3-4 weeks. They consisted of a grammar-based written test and a skit for oral proficiency. Occasionally they wrote short essays on the grammar-based tests.

Assessment Tasks

There were two assessment tasks used in the study. The first addressed the motivational aspect of the study. The motivational questionnaire consisting of 39 questions asked specific questions about attitudes toward school, Spanish ability and computers/technology. Participants answered the questions on a Likert-scale from 1 (strongly disagree) to 5 (strongly agree). The questionnaire also consisted of four free response questions that asked about their expectations about the upcoming semester and in January asked to evaluate their experience. The complete questionnaire can be found in Appendix A.

The second assessment task was a series of questions that participants were required to answer in Spanish; the teacher of the Spanish course created these questions. The questions were in essay format and tested specific grammatical functions. The questions were as follows

1. You just went to the dance of your dreams! What did you do to get ready? Who did you go with? Where did you eat, etc.? Include: DOPs/IOPs, reflexive verbs and the preterite. In Spanish.
2. You and your friend are in the car and have the whole afternoon to spend. Where will you go? What will you do? What other friends will join you? Use a variety of vocab and include DOPs/IOPs, the subjunctive and the impersonal se. In Spanish.

3. How has your day been going so far? Fill me in on everything from what you have done, what you are sorry hasn't happened, what you are doing now and what you hope happens later on. Use the present perfect, present progressive, the subjunctive and the verb sentir. In Spanish.

The two pretests (for motivation and grammar) also served as the posttests.

Testing Procedure

The pretest, comprising the motivation questionnaire and the series of grammar questions, was administered in September at the beginning of the academic year. The posttest was administered at the end of the semester, approximately four months later. During the course of the semester I closely monitored all discussion board activity, looking for student attitudes about the online class (See Appendix C).

Scoring procedure

Questions 1, 2 and 3 were scored as a proportion of grammar used correctly/grammar attempted for each specific grammar item that was asked for in the essay question. For motivational questions that were negative in nature (Writing Spanish is difficult for me, for example), participant choices were reverse coded in reporting data.

Results

RQ1: Qualitative

Participant free responses from September and January motivational measure.

Question #1 (September) How well do you expect to do in Spanish this semester and why?

- 39 students expected to do well because: (3 students listed multiple reasons)
confident in Spanish abilities (13)
confident in Spanish abilities but lists apprehension (3)
confident in overall scholastic ability (10)
confident that online Spanish will be the best way to learn (13)
confident because of the teacher and students (3)
- 2 students were not sure what to expect
- 1 student worried that she would do worse

Question #1 (January): How well did you do in Spanish this semester and why?

(Multiple responses listed)

- 18 students reported doing well or very well
strong Spanish abilities (6)
organized time well (5)
studied hard and did all the work (4)
understood things better this semester (4)
online format conducive to success (2)

good teacher (2)

got help from peers and teacher when needed (1)

- 8 students reported doing okay, but that they could have/should have done better

procrastinated (4)

forgot to check homework and assignments (2)

class harder than in previous years (2)

computer problems (1)

distractions at home (1)

- 5 students reported not doing very well

procrastinated (4)

did not manage time well (1)

assignments and work was hard (1)

- 4 students reported not doing as well as they expected to

online not as effective as in classroom (1)

procrastinated (1)

class was much more difficult than expected (1)

- 3 students reported average

lack of effort (1)

hard to adjust to new format (1)

felt cheated out of conversation time (1)

did not organize time well (1)

- 2 students reported doing well after initially struggling with the new format

- 2 students reported doing worse than last year

class was very hard (2)

did not organize time well (1)

Question #2 (September): Why do you want to take online Spanish? (multiple responses listed)

- 23 students included not having to go to class/free period
- 13 students included can do work on my own time
- 12 students included want a new experience
- 9 students included that they will learn more/the same in an online environment
- 6 students included learn better time management
- 6 students included do not like being in a regular classroom
- 3 students included good for the future/college
- 3 students included I learn better with computers
- 2 students included liking the teacher/environment
- 1 student included wanting an “easy A”
- 1 student included that it will be more if a challenge
- 1 student included wanting to learn computer skills
- 1 student included wanting to review and strengthen Spanish skills

Question #2 (January): Think about why you wanted to take online Spanish. Do you still feel that way and why?

Students who said yes, they still felt the same way and restated one/all of their original reasons

- 16 students included not having to go to class/free period
- 4 students included can do work on my own time
- 4 students included wanted a new experience
- 2 students included do not like being in a regular classroom
- 1 student included I learn better with computers
- 1 student included good for the future/college
- 1 student included liking the teacher/environment

Students who answered Yes, but added reasons why they are taking online Spanish

- 3 students included learning more/the same in an online environment
- 3 students included wanted a new experience
- 2 students included can do work on my own time
- 1 student included not having to go to class
- 1 student included I learn better with computers
- 1 student included I love online Spanish
- 1 student included enjoy the hard work and the challenge
- 1 student included do not like being in a regular classroom

- 1 student included learn better time management
- 1 student included I am more responsible
- 1 student included like working with computers

Students who answered **No**, with explanations

- 1 student said they don't need it in the future so much
- 1 student said they would not take it next semester with no reason given
- 2 students said they did not learn as much as in a regular classroom
- 1 student said it is a lot harder than I thought it would be—but that is good
- 1 student said I didn't do very well
- 1 student said they wanted to take it for better time management and failed
- 1 student said they could not concentrate at home—work suffered

Question #3 (September): What will online give you that offline can't? (multiple responses)

- 11 students included working at own pace/flexibility
- 9 students included learning more/better quality of delivery online
- 9 students included a better communication/relationship with peers/teacher
- 8 students included more responsibility for own learning/challenge
- 7 students included better environment/space
- 7 students included better time management

- 6 students included access to other cultures/more resources
- 5 students included ability to look up and review lessons
- 4 students included Independence
- 4 students included better computer skills
- 3 students included personal lectures
- 2 students included not being as afraid as in a classroom
- 2 students included more time to practice oral skills
- 1 student included more time to work on assignments
- 1 student included a different learning experience
- 1 student included better feedback
- 1 student included nothing it actually might be worse

Question #3 (January): What has the on-line computer environment given you in your Spanish class that a classroom hasn't? (multiple responses)

- 14 students included working/lessons available for review at your own pace/flexibility
- 10 students included time management skills
- 6 students included more quality Spanish learning
- 5 students included independence
- 4 students included improved computer skills
- 4 students included better class make-up/environment

- 4 students included more responsibility
- 4 students included more interaction/discussion with peers
- 3 students included more practice in writing/more written work
- 3 students included more time off school
- 3 students included better/different kinds of assignments for learning
- 2 students included better organizational skills
- 2 students included less stress/embarrassment
- 2 students included more oral speaking time b/c of the conversation requirement
- 1 student included more individual help
- 1 student included more immersion
- 1 student included college preparation
- 1 student included it allows you to work harder
- 1 student included too much freedom/not enough structure
- 1 student included less peer interaction
- 1 student included slower feedback
- 1 student included nothing
- 1 student included less conversation
- 1 student included less personal environment

Question #4 (September): What are the drawbacks to taking a class online? (multiple responses)

- 18 students included must have excellent time management skills/no procrastination
- 7 students included harder to ask questions/get immediate clarification
- 5 students said none/no drawbacks
- 5 students said less fact-to-face learning/in class time
- 3 students included less oral speaking time
- 3 students included a lot of work
- 3 students included computer problems/technical difficulties
- 2 students included less one-on-one time with the teacher
- 2 students included less time to get to know other students
- 1 student included forgetting to check and do homework assignments online
- 1 student included not as many group activities
- 1 student included having to speak for an hour a week w/a fluent Spanish speaker

Question #4 (January): What were the drawbacks to taking this class on-line?

- 9 students included easy to procrastinate/easy to fall behind
- 8 students included no in person teacher support/less teacher interaction
- 7 students included time management being a difficult requirement
- 6 students included complete responsibility for own learning/hard to be self-motivating

- 5 students included forgetting about assignments
- 4 students included No Drawbacks
- 4 students included more/harder work/tests
- 3 students included less peer interaction/group projects
- 3 students included less practice/instruction/review than a classroom setting
- 2 students included less oral speaking practice
- 2 students included computer problems affected ability to do work
- 2 students included did not improve Spanish skills/ability
- 2 students included class moved too fast
- 2 students included harder oral speaking requirement
- 1 student included harder to do work in her home environment
- 1 student included work was better suited for a classroom environment
- 1 student included less in person communication
- 1 student included less challenging work
- 1 student included no excuses for missed work b/c of the weeklong time frame
- 1 student included worried about digital divide issues

Discussion board and student attitudes

Students could post any topic they wanted to start a discussion on. Over the course of the semester, there were 55 discussion topics posted. Most popular topics included weekend plans, SAT and PSAT tests, holidays, computer problems and after

school activities. One student posted a question about how other students felt about Español Virtual and if they would take the class again next semester. He posted two different versions of this inquiry in December and in January. Twenty-nine students responded to his postings and within those twenty-eight responses, four students answered differently than they had on the January motivational measure. The remainder answered as they had on the questionnaire. Their feelings here are interesting to note because the teacher read all discussion board postings, so students had this knowledge before responding to a topic.

Responses: 24 students answered positively that they liked the class and that they would be taking it again next semester. A complete list of student responses can be found in Appendix C (translated to English). Reasons for taking the class again next semester included (students listed multiple reasons):

More time/Only having to come to class once a week 18

I like the class/class is fun/interesting 17

Like doing work on computer 4

I like the teacher 3

Good for future 2

I learn better in this class than offline 3

Assignments are fun 1

Class is educational 1

I am doing well 1

I like to learn different languages 1

Class is easy 1

Two students were neutral in their responses stating that a scheduling conflict with either a sport or another class would prevent them from taking the class again.

Three students answered negatively that they did not like the environment, had not done well and would not be taking the class again next semester. All three students expressed similar thoughts on their posttest questionnaire. Two students expressed that the class was too difficult while one student expressed that the class did not offer enough structure and he needed structure to learn. Four students expressed positive attitudes about the Spanish class, yet expresses opposite views in their posttest questionnaire.

Analyses

To measure change in attitudes and perceived benefits over the semester, paired t-tests were run to determine significant change over time. The significance level was set at $p < .05$ for this and all other statistical tests.

Next, in order to determine how the questions grouped together into categories, a factor analysis was conducted. A principal components factor analysis using varimax rotation was used to determine the factors. Solutions for differing numbers of factors were tried, it was determined that there were two strong factors which had good reliability.

To measure any change in grammar performance over the semester, paired t-tests were run to determine significant change over time in both number attempted and percentage correct.

Then, to determine relationships between motivation and grammar performance, correlations were examined between the motivation factors and the grammar scores by doing Pearson correlation coefficients.

Results

RQ2:

A factor analysis was carried out to see how the 39 questions grouped together. Two factors were extracted which were subsequently evaluated and labeled as *Spanish Ability* and *Computers*.

Spanish Ability

Included Items	Loadings
Attending Spanish class is stressful because I don't want to be called on to speak	.763
Compared to other students at my level, I am strong in my Spanish skills	.696
I practice Spanish outside of school and class assignments	.688
Speaking Spanish is difficult for me	.527
I learn Spanish easily	.796
Spanish is a hard subject for me	.718
Writing Spanish is difficult for me	.617
I have chosen to take Spanish for 3-4 years because I enjoy it, not because I have to	.582

Reliability = .85

Computers

Included Items	Loadings
Outside of school, I use a computer daily	.513
I have strong computer skills	.648

Computers help me perform better as a student	.502
I can learn and think better using a computer than without one	.570

Reliability = .77

T-tests were run for these factors to determine any significant relationship between September and January. No significant difference was found. Mean score for September *Spanish ability* was 3.32; mean score for January was 3.29. Mean score for September *computers* was 3.95; mean score for January was 3.94. In addition, mean scores on 34 of the 39 questions in September and 36 of the 39 questions in January were higher than neutral (mean of 3.00).

Examining all questions, the mean motivation score for all students on all questions was 3.52 in September and 3.44 in January. Results of t-tests for all 39 questions can be found in Appendix B. There were six pairs (difference from September to January) that had a significant ($p < .05$) change for the entire study sample.

Question	Mean	T
I enjoy working on Spanish assignments	3.55 (s) 3.21 (j)	2.471*
Spanish is boring	4.05 (s) 3.67 (j) reversed coded	2.638*
Spanish is a hard subject for me	3.55 (s) 3.14 (j) reverse coded	2.876**
I spend a lot of time working on my Spanish skills and complete all homework and in-class work given	3.71 (s) 3.38 (j)	2.327*

Taking Spanish online helps organize my time better	4.07 (s) 3.38 (j)	3.184**
I will learn/have learned more skills taking online Spanish than I did in my offline Spanish classes	3.69 (s) 3.21 (j)	2.629*

* p<.05, ** p<.01

Additionally, significant factors were found for specific groups within the study sample.

Included are significant factors for groups by gender and grade.

Ran t-tests for gender and grade. Found additional correlations for males (17 cases):

Question	Mean	T
Computers and the Internet do not have an effect on how well I do in school	4.24 (s) 3.24 (j) reverse coded	2.675*

*p<.05

Found additional correlation for 11th graders (17 cases):

Question	Mean	T
I am taking Spanish as an online course because it is an "easy A"	3.41 (s) 3.94 (j) reverse coded	-2.314*

*p<.05

Found additional correlation for 12th graders (25 cases)

Question	Mean	T
Writing Spanish is difficult for me	2.60 (s) 3.04 (s) reverse coded	-2.290*
At school, I use a computer daily	2.28 (s) 2.88 (j)	-2.167*

*p<.05

Found additional correlation for 11th grade girls (8 cases):

Question	Mean	T
I have strong computer skills	3.00 (s) 3.75 (j)	-2.393*

*p<.05

RQ 3:

Of the three essay questions, question one provided the most data from which to work from. Consequently, the preterite and reflexives asked for on question 1 were used for analysis. All t-test were significant for grammar production from September to January. Percentages and number attempted for reflexives and preterite improved significantly over time.

Paired Samples Statistics

		Mean	N	T
Pair 1	Reflexives-number attempted pretest	2.12	42	
	Reflexives-number attempted posttest	4.00	42	-5.356**
Pair 2	Reflexives-percentage correct pretest	.6814	42	
	Reflexives-percentage correct posttest	.8176	42	-2.061*
Pair 3	Preterite-number attempted pretest	10.50	42	
	Preterite-number attempted posttest	14.86	42	-5.342**
Pair 4	Preterite-percentage correct pretest	.7119	42	
	Preterite-percentage correct posttest	.8383	42	-3.947**

*p<.05, **p<.01

RQ 4:

Correlations

		SPAN_JAN	Computer_Jan
Reflexives-number attempted posttest	Pearson Correlation	.182	-.214
	Sig. (2-tailed)	.250	.174
	N	42	42
Reflexives-percentage correct posttest	Pearson Correlation	.243	-.195
	Sig. (2-tailed)	.121	.216
	N	42	42
Preterite-number attempted posttest	Pearson Correlation	-.041	-.302
	Sig. (2-tailed)	.799	.052
	N	42	42
Preterite-percentage correct posttest	Pearson Correlation	.407**	-.325*
	Sig. (2-tailed)	.007	.035
	N	42	42

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed)

Correlations

		Spanish factor	Computer_Sept
Reflexives-number attempted pretest	Pearson Correlation	.077	-.063
	Sig. (2-tailed)	.628	.693
	N	42	42
Reflexives-percentage correct pretest	Pearson Correlation	.020	.017
	Sig. (2-tailed)	.902	.914
	N	42	42
Preterite-number attempted pretest	Pearson Correlation	.185	.114
	Sig. (2-tailed)	.242	.473
	N	42	42
Preterite-percentage correct pretest	Pearson Correlation	.286	-.330*
	Sig. (2-tailed)	.066	.033
	N	42	42

* . Correlation is significant at the 0.05 level (2-tailed)

Discussion

Student Attitudes and 21st century skills

93% of respondents in September believed they would do well or very well in online Spanish. Reasons given were varied, the most often given reasons included: confidence in Spanish abilities (35%), believing that the technology/delivery would help them learn and succeed in Spanish better (33%), and confidence in overall scholastic abilities (25%).

By the end of the semester, evaluation of their performance greatly diminished from original expectations. 47% responded that they had done well or very well in online Spanish (included here are two students who reported doing well after initially struggling with the new format), a 46% decrease in original expectations. 28% of students reported doing okay or average, with 75% of those students acknowledging that they could have/should have done better. 16% of students reported not doing very well or worse than last year and the remaining 9% of students reporting that they did not do as well as they expected to. From this data we see that participants were very enthusiastic about taking online Spanish at the beginning of the semester. Most students believed that at the very least, their Spanish abilities would not suffer from the new format and from the response, it seems that a significant number believed that the online format would really improve their knowledge of Spanish, and be a better way to learn.

By the end of the semester, however, the reality of their experience had readjusted the great expectations. Over half of the students (53%) did not believe they had done well or very well in the class. This seems to be contradictory to the letter grades given at the end of the semester. Although not examined here, most student received A or B grades. Students did appear to improve in abilities, at least in the area

of grammar performance, and yet so many of them came down from original high expectations. One possible explanation is that the students were very excited about a class in such a new and different delivery format. This translated into high expectations about what such a delivery format would be able to do for them in terms of abilities. Many may have also thought that it would be an easy class and therefore they expected to do very well.

For question 2, the focus was not to see if the participants could remember their original reasons for wanting to take the course, but instead to understand why they were still taking the course (given that they were not allowed to drop the course). Participants were informed that they should answer the question by talking about why they were still taking the class. The number one reason to take online Spanish in September was still the main reason for taking the class in January, namely to *have a free period/not have to go to class*. The 43 students gave 81 total reasons in September and of those 81 reasons, 53% went to the *free period/no class* response. In January, there were 52 reasons given for continuing to take online Spanish or why they would not take it again next semester and of those, 40% again went to the *free period/no class response*. Other reasons given in September had to do with what students believed they would get in an online environment that perhaps they couldn't get in a classroom. Many of the answers given overlapped with Question 3, which focus on exactly this issue. The three most often given reasons after the free period response were: *can do work on my own time* (30%), *want new experience* (28%) and *I will learn more or the same in an online environment* (21%).

The number of reasons given in January dropped off considerably. Students were asked to remember why they wanted to originally take online Spanish and if and why it was still true. Many students could not remember why they originally wanted to take it, but gave their reasons for taking it in the present. Many just answered “yes, the reasons are the same” and never elaborated. 36% of the original reasons were confirmed as reasons still taking online Spanish at the present. Students added 24 reasons that they had not mentioned in September (16 additional reasons why students answered Yes, they still felt the same way and 8 reasons that students gave after they answered No, I do not feel the same way). Of the most given responses in September, *doing work on my own time* accounted for 12% of the total responses in January (6 responses out of 52 total reasons in January), *wanted a new experience* accounted for 13% of responses while *I will learn more/same in an online environment* accounted for 6%.

Of the students who answered *No, I still do not feel the same way*, reasons given included: *did not learn as much as would have in a regular classroom* (2), *was a lot harder than I thought it would be* (1), *didn't do very well* (1), *failed with time management* (1), *work suffered because I could not concentrate at home* (1), and *don't need it in the future so much* (1). Overall, only eight students responded that they did not feel the same way, with one of those students saying “No” as a positive review. This leaves 36 students still feeling basically the same as they did when they started.

There were 13 reasons given in September for taking online Spanish, 11 having a “positive” connotation, the popular reason of getting out of class and one reason of

wanting an “easy A”. By January, ten “positive” reasons were repeated, the popular reason was reiterated, the “easy A” reason was gone, three new “positive” reasons for taking online Spanish were added and 7 new reasons for not taking it were included. This suggests that some students did indeed realize that online Spanish was not everything they thought it would be, but most students seemed to be satisfied with the overall picture.

For question 3, 81 responses of 17 different qualities were given at the beginning of the semester; 80 responses and 16 qualities were positive in nature. Only one student thought that online would give you “nothing, it actually might be worse.” By January, 76 responses of 24 different qualities were given; 70 responses and 18 qualities were positive in nature; negative qualities had grown to 6.

In September, the most often mentioned responses included, working at own pace/flexibility (14%), learning more/better quality of delivery online (11%), better communication/relationship with peers/teacher (11%), and more responsibility for own learning/challenge (10%), there were many other qualities, no one quality mentioned over any other. By January, there were two clear dominant qualities that the students identified online having over offline. Working at your own pace/flexibility (18% of the 76 responses) and time management skills (13%) were significantly higher than the third most often mentioned response, more quality Spanish learning (8%).

The negative response in September was an answer of “nothing”; in January, that response was given again along with 5 other negative responses which included, “too much freedom/not enough structure, less peer interaction, slower feedback, less

conversation and less personal environment. It is interesting to note that the very next question asks them about the drawbacks and yet there were still six negative responses (from different students) in this question.

From the qualitative free responses and the discussion board data, student attitude change from September to January is a shift from almost utopian expectations to a more reality focus. Additionally, participant perceived benefits focused, not heavily on engagement or on Spanish skills gained, but on new skills and demands they were faced with and acquired because of the new medium. Salaberry (1996) sees three traits of the CMC environment as of utmost importance for the successful design of pedagogical environments in the L2 classroom: interaction for purposes other than strictly academic skills, the new discursive nature of electronic communication, and the asynchronous nature of computer based telecommunications. Student free responses on the pre and posttest discuss benefits and drawbacks in Español Virtual that extend beyond traditional academic expectations.

This question, more than any other, indicates what the participants themselves saw as the benefits of computer-mediated communication. Participants were expecting to gain skills that would benefit them in college and in the 21st century workforce. Although the benefits listed dropped by January, there were still a very high reporting of the skills gained by their semester online. Skills most often listed included better time management skills, independence, improved computer skills, more responsibility for own learning, more discussion and interaction with peers. These are the kinds of skills that the K12 community is demanding be included in the classroom alongside

basic skills curriculum. Most of participants here identified that they felt they had gained these skills.

This question shows the high expectation and attitude students had when beginning the course. 80 potential positive qualities were given about the learning experience they were about to enter, with only one student offering up anything negative. By January, however, they had time to really evaluate their experience and while certainly not condoning the experience (question 2 showed us that they were still pretty much happy with their situation), there were less positive responses written and several more negative qualities added. I think there is something to be written here about the fantasy of a new educational delivery system and what that creates in a student's mind as they are about to begin and then the reality of the educational experience and the objective evaluation that comes at the end. The majority of these kids are certainly not unhappy with their experience, just grounded.

For question 4, 51 responses on 11 different potential drawbacks were given in September. Included in the 51 responses was the answer "no drawbacks/none" which was given 10% of the time. I did not include this response in the 11 potential drawbacks, as it is not a drawback, therefore, there were 46 drawback answers given. Far ahead of the pack was *must have excellent time management skills/no procrastination* (35%). A distant second was *harder to ask questions/get immediate clarification* (14%). *Less face-to-face learning/in class time* and *no drawback/none* each accounted for 10% of the responses.

By January, 65 responses on 19 different drawbacks were given. Included in the 65 responses was again the answer “no drawbacks/none” which was given 7% of the time. Again, this was not included in the 19 drawbacks counted, therefore 61 drawback answers were given.

There were more and additional drawbacks listed from students in January. This is consistent with the overall finding from this qualitative data that students had high, positive expectations about the online class they were about to take and listed therefore did not list many drawbacks in September. The number of positive qualities listed for question 3 in September (81) vs. the number of drawbacks given (51), reveals a big difference. By January, positive question 3 responses were at 76 and drawbacks listed increased to 65. Positive qualities still outweighed the drawbacks, but the numbers most likely are adjusted to a more realistic number. Students for the most part did enjoy their experience, but it was not the utopia they believed it to be in September.

RQ2

T-tests on the factors showed no significant changes for participant attitude over the course of the semester. This could very well be because these students are honors or college-prep students and had high motivation throughout the semester. The small, significant items do point to a few areas to consider. Question 36 and 37 (*Taking Spanish online will/has helped organize my time better and I will/have gained more skills taking online Spanish than I did in my offline Spanish classes*) speaks to the qualitative data that suggests students had extremely high expectations about a web-

based Spanish course, but by the end of the semester, attitudes about what technology could do for education had subsided without moving into a negative area. Questions 18 and 21 (*I enjoy working on Spanish assignments and Spanish is boring*) suggest that after a semester of a web-based course, a positive attitude of Spanish did not increase. Question 25 (*Spanish is a hard subject for me*) seems to be in line with the qualitative data that spoke about the hard work that made up the web-based course.

For males, question 31 (*Computers and the Internet do not have an effect on how well I do in school*) was in line with questions 36 and 37 in which students' high expectations about the new medium readjusted to a level that was consistent with their semester.

For 11th graders, there was a higher feeling in September that this course was not going to be difficult, but they learned otherwise by the end of the semester. This is in line with the qualitative data that showed students in September believing that they would do extremely well in the class and by January acknowledging that they had not done as well as they had hoped for a variety of reasons, one of which being that it was a lot harder and a lot more work than originally anticipated.

For 12th graders, a significant change was found in their attitudes about their Spanish writing ability. Also, an increase amount of time was spent using a computer at school (they were not required to use school computers to complete assignments).

For many students answering the free response questions, taking online Spanish is about much more than wanting to learn Spanish or having a different way of

delivering curriculum; it is about gaining skills that will help them in college and in life. Skills like having strong computer skills, strong organizational skills, etc continued to play a factor in why students wanted to take the class. These 21st century skills are seen by some as just as important than traditional academic goals. For 11th grades girls, a significant change in belief about their 21st century skills was found.

RQ 3

Grammar improved significantly over the course of the semester. However, without a control group (since one was not used in this study) we cannot claim that the web-based delivery system helped to improve grammar performance. The maturation factor is important here; it is expected that grammar will improve over time. Many other factors could have contributed to this as well, such as the teacher, extra help, offline activities/tasks, etc. It is a positive sign, however, that a CMC based class (which tend to focus on content and not on form) did not diminish grammar performance; such a CMC class, given the maturation factor, may potentially facilitate grammar performance over time.

RQ4

Correlations were examined between the pretest variables and the September factors and the posttest variables and the January factors. Preterite percentage posttest correlated positively with the *Spanish ability* in January and negatively with the *computers* in January. The preterite percentage pretest correlated negatively with the *computers* in September. The correlations show that participants who had high Preterite percentage posttest scores had high *Spanish ability* in January and those who had high

Preterite percentage posttest scores had low *computers* scores in January. Those who had high preterite percentage pretest scores had low *computers* scores in September.

Conclusion and directions for future research

The findings of this study lead to the following conclusions for the given sample of participants:

1. Participants' attitudes about school, Spanish ability and computers before and after exposure to a partially web-based course did not change significantly over time.
2. Participant grammar performance over the semester did significantly improve, but do to the absence of a control group; maturation must be considered a prominent factor in this improvement.
3. Participants who had the highest Preterite percentage posttest scores had the lowest attitude scores for the *computers* factor in September and in January, which appear to suggest that participants who perform best don't necessarily believe that technology plays a key role in that performance. Correlations show that participants who had high Preterite percentage posttest scores had the highest attitude scores for the *Spanish ability* factor in January which appears to suggest that those students who perform best also believe in their abilities.

4. Participants, although overly optimistic at the beginning of the semester about the skills they would gain by taking a web-based course, still believed in January that there were many benefits and skills gained (time management, self-motivation, for example) from the course beyond Spanish improvement.

This study focused on a pre and post motivational questionnaire and grammar assessment to begin to understand the web-based secondary school classroom and changes in attitude over time. These findings must be considered in context of the research study. This study did not compare two classroom settings; it compared one classroom setting over time. Results were based on classroom changes over time. More research should be conducted at the secondary school level to help K-12 educators understand the learning outcomes of the newer technologies. Research should be conducted over a much longer span of time to follow adolescence over the course of a year or more to determine lasting learning outcomes. Attitude questionnaires before and after exposure are limited and should be implemented in more studies, perhaps with a longer Likert-scale (1-10) to more closely study attitude changes over time.

Appendix A

Statement	Strongly Agree	Agree	Undec.	Disagree	Strongly Disagree
It is important for me to do well in school	5	4	3	2	1
Homework is a daily struggle for me	5	4	3	2	1
I only speak in class when I am called on	5	4	3	2	1
I wouldn't go to school if I didn't have to	5	4	3	2	1
I participate in after-school activities	5	4	3	2	1
I get good grades	5	4	3	2	1
I enjoy going to school everyday	5	4	3	2	1
School is boring	5	4	3	2	1
I like talking in front of people	5	4	3	2	1
I speak up in class often	5	4	3	2	1
I will procrastinate on assignments that are not due immediately	5	4	3	2	1
If I am absent, miss a few assignments or fall behind in a class, it is hard for me to get caught up again	5	4	3	2	1
Attending Spanish class is stressful because I don't want to be called on to speak	5	4	3	2	1
I enjoy working on Spanish assignments	5	4	3	2	1
Compared to other students at my level, I am strong in my Spanish skills	5	4	3	2	1
I practice Spanish outside of school and class assignments	5	4	3	2	1
Spanish is boring	5	4	3	2	1
Speaking Spanish is difficult for me	5	4	3	2	1
I learn Spanish easily	5	4	3	2	1
It is important for me to speak Spanish well	5	4	3	2	1
Spanish is a hard subject for me	5	4	3	2	1
Writing Spanish is difficult for me	5	4	3	2	1
I have chosen to take Spanish for 3-4 years because I enjoy it, not because I have to	5	4	3	2	1
The way Spanish is taught in school is not the most effective way to learn the language	5	4	3	2	1
I spend a lot of time working on my Spanish skills and complete all homework and in-class work given	5	4	3	2	1
Taking Spanish on-line has not	5	4	3	2	1

helped my Spanish speaking skills					
Computers and the Internet do not have an effect on how well I do in school	5	4	3	2	1
Classroom assignments on-line has helped improve my Spanish skills	5	4	3	2	1
Outside of school, I use a computer daily	5	4	3	2	1
Spanish is a hard subject to learn on-line	5	4	3	2	1
I am taking Spanish as an on-line course because it is an "easy A"	5	4	3	2	1
Taking Spanish on-line has helped organize my time better	5	4	3	2	1
I have gained more skills taking online Spanish than I did in my offline Spanish classes	5	4	3	2	1
At school, I use a computer daily	5	4	3	2	1
I have strong computer skills	5	4	3	2	1
I am taking an on-line course because it is easier than going to class	5	4	3	2	1
Computers help me perform better as a student	5	4	3	2	1
My Spanish skills have improved because I am taking an on-line course	5	4	3	2	1
I can learn and think better using a computer than without one	5	4	3	2	1

Appendix B

Survey Question	September Mean	January Mean
It is important for me to do well in school	4.93	4.81
Homework is a daily struggle for me**	3.40	3.48
I only speak in class when I am called on**	3.48	3.60
I wouldn't go to school if I didn't have to**	3.67	3.67
I participate in after-school activities	3.81	3.86
I get good grades	4.31	4.14
I enjoy going to school everyday	3.17	3.19
School is boring**	3.10	3.17
I like talking in front of people	2.64	3.00
I speak up in class often	3.24	3.33
I will procrastinate on assignments that are not due immediately**	2.71	2.52
If I am absent, miss a few assignments or fall behind in a class, it is hard for me to get caught up again**	3.36	3.10
Attending Spanish class is stressful because I	3.50	3.55

don't want to be called on to speak**		
I enjoy working on Spanish assignments	3.55	3.21
Compared to other students at my level, I am strong in my Spanish skills	3.21	3.26
I practice Spanish outside of school and class assignments	3.48	3.21
Spanish is boring**	4.05	3.67
Speaking Spanish is difficult for me**	3.24	3.40
I learn Spanish easily	3.21	3.31
It is important for me to speak Spanish well	3.67	3.55
Spanish is a hard subject for me**	3.55	3.14
Writing Spanish is difficult for me**	2.83	3.05
I have chosen to take Spanish for 3-4 years because I enjoy it, not because I have to	3.55	3.40
The way Spanish is taught in school is not the most effective way to learn the language**	3.02	3.02
I spend a lot of time working on my Spanish skills and complete all homework and in-class work given	3.71	3.38
Taking Spanish on-line will not/has not helped my Spanish speaking skills**	3.81	3.62
Computers and the Internet do not have an effect on how well I do in school**	3.95	3.69
Classroom assignments on-line has helped improve my Spanish skills	3.62	3.62
Outside of school, I use a computer daily	4.48	4.45
Spanish is a hard subject to learn on-line**	3.69	3.40
I am taking Spanish as an on-line course because it is an "easy A"***	3.93	4.07
Taking Spanish on-line will help/has helped organize my time better	4.07	3.38
I will/have gained more skills taking online Spanish than I did in my offline Spanish classes	3.69	3.21
At school, I use a computer daily	2.31	2.67
I have strong computer skills	3.83	3.95
I am taking an on-line course because it is easier than going to class**	2.79	2.67
Computers help me perform better as a student	3.88	3.95
My Spanish skills have improved because I am taking an on-line course	3.36	3.29

I can learn and think better using a computer than without one	3.62	3.40
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****reverse coded**

Appendix C

Responses posted to December and January topic translated here into English for attitude evaluation:

Who is going to continue is virtual Spanish? I am going to continue because the class is very enjoyable and I like that I can leave school early. The second posting read: Who is going to continue with Spanish in sixth period? Who is going to continue with Spanish in first period? I am going to continue in 6th period because I am not going to wake up early for school.

I am going to continue in this Spanish class. I like the class because it is very enjoyable and I like that I can leave school early. *Same student in January:* I believe I am going to continue in Virtual Spanish. I like to do my work on a computer and going to class once a week.

The Spanish class is a little difficult, but it is a very interesting class. I like the class because I use a computer and the exercises/assignments are very fun. To get good grades and to go to college, I need Spanish. Universities like to see Spanish and the classes will also use computers.

I am going to continue online Spanish because the class is very enjoyable and I like leaving school after fifth period. The class is also very educational.

I will probably continue. I can use my free time to do the work the way I want to. I do not like school assistance more than necessary.

I cannot continue in virtual Spanish next semester. I do not have time because I need to take Civics to graduate. *Same student in January:* I am not going to continue with 1st period Spanish. I need to take fine arts and civics. I have to take 6 periods for next semester.

I am going to take the class next semester. I am doing well in the class and the class is very fun. Also, I like to leave school early. Same student in January: I am going to continue in 6th period Spanish because I am not going to take a 5th period next semester. I will get to leave school at mid-day everyday except Thursday.

I am going to continue is this class! This class is very enjoyable than other Spanish classes.

I am going to continue in virtual Spanish next semester. I believe that the class is enjoyable and I like Spanish. At times I believe it is a little bit difficult but I still like it.

I am also going to continue in the Spanish class because I like this class. I like this class very much and I learn Spanish better in this class than in regular Spanish. *Same student in January:* I am going to continue with 6th period Spanish because I like doing my work on a computer. It is much easier than a normal Spanish class.

I love (really enjoy in capital letters) this online class. It is obvious that I am going to take the class next semester. I think that some people think the class is difficult. I like being able to leave at 1:30 each and every day. I have taken Spanish for the past three years but I have benefited from this class the most. I have only had this class for twelve weeks and I have learned so much! If I had not taken this class, it would have been such a shame (for me). Thank you Mrs. Manly. See you later/good-bye.

Yes, I expect to continue with Spanish because I like the online class. We have to come to class only on Thursdays. That is very good for me because I work at The Gap and Sephora during the week. I need the time to study. *Same student in January:* Yes, I want to continue with the Spanish class. Because I believe the class is very good. I like coming to class early.

I am going to continue in the class. I like the class and also the teacher. The class is very enjoyable! *Same student in January:* I am going to continue with 6th period Spanish also. I like the class and the teacher.

I am not going to continue with virtual Spanish. I am not going to continue because the class is very difficult. I like that I can arrive at school late.

I am not sure if I am going to continue in Spanish 7/8 because I have a very busy schedule with Crew. I have to get my schedule first and then I will know.

The class is a little more difficult than I thought. But I am going to continue with the class, I enjoy it very much and I like to learn school after fifth period. I have to do more work and study more for next semester.

For sure I will continue with virtual Spanish. I am the *el papichula* of Spanish (you too, Ivan, right?), and I like coming late to school. I need to sleep much more. *Same student in January:* I am going to continue in 1st period, because I need to sleep more, I am always tired.

I am going to continue with virtual Spanish because I like to learn different languages. Also, I work in the afternoon.

Yes, I believe that the online Spanish class is fun also. Mrs. Manly is, though not present/not here, IS very nice and teaches very well. And I like the people in the class. But, my favorite thing about the class is that all the classes leave early (we get out of school early?)

I am not going to continue in virtual Spanish. My grade is not good and my mom does not want me to continue. I am sorry I am not doing better in the class.

I think I am going to continue in online Spanish. But I am not getting a very good grade, so I am not going to take the class next semester. But I want to change the period because I going to run track and field. (this doesn't make sense to me).

I want to continue with virtual Spanish. The class is very enjoyable and I like the exercises and the activities on the computer.

I am going to continue in this online course. My grade is not very good right now, but I am going to improve and get a better grade. I am not doing my best in this class.

I am going to continue in virtual Spanish because it is very interesting and it might be easier for me when I take an online class at college.

I am not going to continue with virtual Spanish. I need to go to school and be in classes for the entire day to learn. I need STRUCTURE in my school day and in my classes.

I am going to continue with virtual Spanish because the class is very enjoyable. I like the class because I have learned a lot during the semester. Also, we don't need to go to class every day of the week.

I am going to continue because this class is very interesting and enjoyable. With this class, I don't need to go to school for first period during the week.

I am going to continue with virtual Spanish because the class is easy and I like to sleep in the morning. I am hoping that the students will continue also. Same student in January: I am going to continue with 6th period Spanish. I need a lot of sleep and I do not want to get up early in the morning.

I am going to continue with Virtual Spanish during first period because I like to sleep in during the morning. Next semester, I am not going to take chemistry. I received a D this semester so it will be easier to take it again my senior year.

I will continue in 6th period Spanish next semester, but I want to be in 1st period because I need more sleep. Each night I do not go to sleep until 1 or 2.

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