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Michael Barbour is an Assistant Professor in the Instructional Technology program at Wayne State University. However, at the time this research was conducted he was doctoral student at the University of Georgia. Michael's research interests focus upon on rural K-12 students learning in virtual school environments and how these programs can be delivered in a manner that is accessible to all students.

## Secondary Students Perceptions of Web-Based Learning

**Abstract** – In this paper, the author presents the results of a survey study of secondary students' perceptions of useful and challenging characteristics. Data were collected using a modified version of a questionnaire from earlier studies. More specifically, the author focuses on what web-based learning looks like for secondary students, along with their perceptions of the benefits, challenges, and helpful components in the web-based learning environments. As this study utilized similar instruments to earlier studies that looked at the perceptions of post-secondary students and corporate web-based trainees, comparisons will be made between the secondary students in this study and the populations in those other studies.

Schools in rural jurisdictions have historically faced challenges in providing comparable curriculum opportunities to their students as compared to school in urban and suburban areas (Barker, 1985; Beckner & O'Neil, 1980; Benson, 1998; Crocker & Riggs, 1979; Government of New York, 1992; Harrison & Downey, 1965; Riggs, 1987; Ryan, Sackney & Birnie, 1981). Over the past two and a half decades, one of the ways rural schools have addressed this disparity has been through the use of distance education. For example, Barker (1991) described how over 1000 schools in more than 40 states in the United States were using satellite telecommunications, audiographic, or two-way television distance education systems.

Over the past decade, one of the more common forms of distance education has been web-based or online delivery, often called virtual schooling. The first two virtual schools in the United States were the Virtual High School (VHS) in Concord, Massachusetts and the Florida Virtual School (FLVS). The VHS was created through a five year, \$7.4 million federal grant (Pape, Adams & Ribeiro, 2005), while the FLVS was established through an allocation of \$200,000 from the state legislature (Friend & Johnston, 2005). The following school year (i.e., 1997-98) the VHS offered twenty-eight courses to twenty-eight schools that were a part of the initial consortium. The FLVS also began offering courses that same year with an enrollment of 157 students. Even before these two virtual schools in the USA, four schools in the Canadian province of Alberta created virtual schooling programs and offered courses to their students as early as the 1995-96 school year (Haughey & Muirhead, 2004).

In her recent review of distance education literature in the K-12 environment, Rice (2006) called for additional research to examine “the critical components of learning directly related to young learners” (p. 244). Further, as this form of distance education becomes more common, and more necessary, in rural schools it is important for researchers to investigate student perceptions of this new learning environment. In this regard, the purpose of this study is to investigate the perceptions of students who have completed courses from a virtual high school on helpful and challenging components of their virtual schooling, specifically to explore virtual school learning from the perspective of the secondary students to inform the creation of strategies that can be implemented to assist those who prepare and deliver instruction in virtual school environments.

### Literature Review

There has been much written about the benefits and challenges of virtual schooling at an institutional level (e.g., Berge & Clark, 2005; Kellogg & Politoski, 2002; Zucker & Kozma, 2003). However, most of this literature has been based upon the experiences of those engaged in the delivery of virtual school opportunities. While there have been little actual research conducted on the benefits and challenges from a virtual school student perspective, research literature at the post-secondary level indicate that scholars have begun to study these issues with adult populations in online learning environments.

At the post-secondary level there have been a number of recent studies exploring student perceptions of the strengths and weaknesses in online learning environments. Petrides (2002) interviewed students in a one-semester course that used a web-based learning system as a supplement to their classroom meetings. She found that students enjoyed the ability to reflect upon other students contributions to the asynchronous discussion forum. This was similar to Vonderwell (2003), who found that students in her interview study indicated that the

asynchronous discussion forum provided them the opportunity to express themselves more carefully. Barbour and Collins (2005), in their three year study of asynchronous discussion forums in two elective science courses, suggested that the process of carefully crafted writing about a topic led to better mastery of the content.

Another strength of online learning at the post-secondary level is the flexibility that can be offered (Schrum, 2002). Chizmar and Walbert (1999) found that students enjoyed the ability to pick and choose from a variety of learning experiences offered to them and felt that it allowed them to select the one that was most suitable to their own learning style. Another aspect of flexibility found by Petrides (2002) was that students indicated that working in groups was easier because they were not tied to the specific scheduled time that a face-to-face class would normally offer. Similar to the issue of flexibility, convenience was also a strength of online learning at the post-secondary level. Students involved in a discussion-oriented online course described in Poole (2002), for example, stated that they appreciated the convenience of being able to participate at times and in locations that were convenient to them. Murphy and Collins (1997) also found that participants reported enjoying being able to participate asynchronously, when it was convenient to the student. Further, students in two business courses through the Michigan Virtual University indicated that the ease of use and organization of learning materials were perceived as strengths of their online learning experience (Smart & Cappel, 2006).

In terms of the weaknesses of online learning perceived by students at the post-secondary level, the time it took for students to receive feedback from instructors was seen as a common weakness. Petrides (2002) found student complaints about the lack of immediacy in receiving feedback from their online instructor compared to what they would have received in a classroom-based environment, particularly when using e-mail and the asynchronous discussion forum. The

students described in Vonderwell (2003) were more direct in their criticism on this issue, stating that “it might take hours, maybe a day or so before you get an answer back for the question” (p. 84). This was consistent with the findings reported in Hara and Kling (1999), who conducted case studies of students taking a web-based course, and found that students felt frustrated with the time it took to receive feedback.

A sense of isolation or a lack of community is another weakness identified with online learning at the post-secondary level. Vonderwell (2003) reported that while students felt some sense of familiarity with the instructor, they didn’t feel as if they really knew him. Woods (2002) indicated that in addition to feeling isolated from the instructor, online learners typically feel isolated from other students in the course as well. This may explain Petrides’ (2002) finding that students questioned the level of expertise that their colleagues possessed. Smart and Cappel (2006) also found that students felt that there needed to be more detailed directions for activities and assignments given in their online environment.

However, one of the difficulties with this line of inquiry, even at the post-secondary level, is that many research studies on web-based instruction were “anecdotal [rather] than systematically empirical or critical” (Hara & Kling, 1999). While some of the research that has been conducted would stand up to Hara’s and Kling’s criticism (e.g., Hartley & Bendixen, 2001; Hill, 2002; Cereijo, Young & Wilhelm, 2002; and other examples discussed above), there is a need for more intensive research studies on the difficulties in providing high quality web-based instruction, pedagogical strategies to promote students’ online learning experience, and the impact of learner characteristics on learner’s web-based learning experience (Hartley & Bendixen, 2001; Hara & Kling, 1999, 2001; Cereijo et al., 2002). This is particularly true at the K-12 level, where even less systematic research has been published.

## Methodology

This current study was a part of a larger initiative by an online learning research group at the University of Georgia. Prior versions of this study have been undertaken with post-secondary students (i.e., Song et al., 2003; Singleton et al., 2004) and with corporate web-based trainees in the United States and in South Korea (i.e., Jones et al., 2004a, 2004b, 2004c, 2004d). The post-secondary version of this study was conducted over a two-year period and included 138 participants from a large southern university. The corporate web-based training version of this study was conducted over a one-year period and included 58 participants from a major global corporation in the United States and 59 participants from a different major global corporation in South Korea.

This study was a continuation of this line of inquiry with a population of secondary school students in a province-wide virtual school in Canada. To guide this study, the researcher focused on two primary research questions:

- 1) What virtual school learning components do secondary students recognize as helpful in the learning process?
- 2) What virtual school components do secondary students recognize as challenging?

Similar to the previous studies, the researcher utilized surveys as the primary method of data collection. According to Bartlett (2005), surveys are a frequently used method of data collection for assessing things that are not necessarily observable, such as student perceptions. The online learning experiences survey that was used was a modified version of the survey that had been used in the previous studies to be more applicable to a virtual high school audience (see Appendix A). The modifications that were made were due to the differences in the distance education technologies that were being used and the differences in the nature of the adolescent

audience. For example, the potential responses for the question “Which of the following technologies did you use while of taking web-based courses?” would have been changed to include all of the technologies that were available within the students’ virtual high school context. Another example was the changes to the demographic questions asked of students.

The virtual high school audience selected for this study were students that had completed at least one course through the Centre for Distance Learning and Innovation (CDLI) in the Canadian province of Newfoundland and Labrador. The province, located on the east coast of Canada, has both an island and mainland portions with a total area of approximately 250,000 square miles, has a population of approximately 510,000 people. The majority of the roughly 300 schools are located in these rural communities and approximately one third have been determined as necessarily existent (i.e., when a school is located so far from another school that it makes bussing the students to impossible due to distance). As with most rural areas, many of these do not have ample numbers of teachers and are unable to offer many aspects of the provincially mandated curriculum. After a history of using distance education, both audiographics and web-based systems to address the curriculum opportunity gap that existed in rural schools, the CDLI began in 2001-02 with 10 web-based courses piloted with 200 student enrolments from 76 different schools. By the 2004-05 school year, the CDLI had expanded to 35 courses and 1500 student enrolments from 95 different schools (Government of Newfoundland, 2004). The delivery model utilized by the CDLI is a combination of asynchronous instruction using a content management system and synchronous instruction using a virtual classroom.

All four English-speaking school districts in the province agreed to allow their schools to participate and eighteen schools, representing all four districts, agreed to circulate the surveys to their students. A total of 38 rural school students completed the survey between February and

May 2005. Compared with 76 and 62 post-secondary participants over two years, and with 58 and 59 corporate participants, this was a lower response rate than the research group had experienced in previous studies. The issue of non-response in survey research has been on the rise in recent years, as there has been a general increase in the amount of survey research being conducted (Atrostic, Bates, Burt & Silberstein, 2001; Baruch, 1999; de Heer, 1999). This could easily be true with students enrolled in the Centre for Distance Learning and Innovation, as it is Canada's only province-wide virtual school and the Faculty of Education at the province's only university has created both a Master's degree in educational technology and a doctoral degree in Education in the past eight years.

Of the 38 participants, 68% of them were female and 29% were male (with one student who did not respond to this question). Most of the students had completed two or more courses, with 42% having taken only one course and 13% having taken five or more courses. The largest number of student participants were grade 12 students (47%), with 26% being in grade 11 and 24% being in grade 10 (one participant did not respond to the question).

## Results

Overall students were generally satisfied with their virtual schooling experience. When asked, if they were satisfied with taking virtual school courses, 86.8% indicated that they were satisfied. Further, when asked if they were satisfied with all of their experiences in their virtual school courses, only 5.3% selected either of the two dissatisfaction options (i.e., 1 or 2 on the five-point Likert scale). This was consistent with the low number of students (7.9%) who indicated that they were less satisfied with their virtual school courses compared to their classroom-based courses. In fact, 63.2% of students indicated they were more satisfied with their

virtual school courses. This is a little surprising, given that 50% of students stated that their virtual school courses were more difficult than their classroom-based courses.

Students reported to spending between three to six hours working on each of their virtual school courses each week. In addition, only 10.5% of the students indicated that they could access the Internet at home, while 34.2% said they could access the Internet at a public library and 76.3% could access the Internet at a friend’s home – although it is not clear whether they would access their virtual school course(s) from these locations, as students were not asked this specific question. Finally, 81.6% stated that the reason they took the course through the virtual school was because it was the only way the course was offered, 47.4% wanted to try a virtual school course, and 26.3% of the students indicated the course they took was a required course (n.b., students were able to select more than one response).

In terms of useful tools in their virtual school courses, students indicated that e-mail and the virtual classroom were the two most useful tools used by or with their teacher (see Table 1).

*Table 1. Helpful tools in their virtual school course*

Internet tool	Mean response (1-5)
Virtual Classroom	4.82
E-mail	4.00
Discussion Forums	3.24
Interactive Items	3.03
File Transfer Protocol (FTP)	3.03
Audio Clips	2.84
Chat	2.74
Video Clips	2.50

Interestingly students also reported some challenges in using many of these tools, with 24% experiencing some difficulty with the audio clips, 21% with the discussion forum and file transfer protocol, 18% with the video clips, and 16% with the interactive items and the virtual classroom.

In addition to some difficulties with the tools, students also encountered other problems while taking their virtual school courses. The main problems, based upon their responses, included technical issues such as those described with the tools, lack of time, and difficulty understanding goals or objectives (see Table 2).

*Table 2.* Problems encountered in their virtual school course

Problem	Percentage of students who selected this problem
Technical problems	71.1
Lack of time	50.0
Difficulty understanding goals/objectives of the course	34.2
Can't find the information I need in order to be successful	15.8
Lack of sense of community	13.2
Other – can't always get in contact with the instructor	7.6
Lack of adequate Internet knowledge	2.6
Other – slow Internet connection	2.6
Other – large classes	2.6

While it wasn't a listed option, it is interesting to note that students did not add a lack of home Internet access in the "Other" field. They did use this field to indicate three problems in addition to the choices listed and only one in ten students reported to access the Internet from home.

When asked which factors were important for success in a virtual school course, students had a high level of agreement with all of the suggestions listed in the survey (see Table 3).

Table 3. Factors important for success in a virtual school course

Factor	Percentage that responded				Mean (1-4)
	Not important	Somewhat important	Important	Very Important	
Clear objectives		11.1	36.1	52.8	3.42
Well-organized content	2.6	7.9	33.3	67.7	3.67
Exercises	5.3	13.2	50.0	36.8	3.24
Quizzes	7.9	34.2	44.7	34.2	3.11
Tutor Feedback		7.9	18.4	34.2	2.83
Motivation of the student			21.6	70.3	3.62
Time management of the student		10.5	21.1	76.3	3.78
Technology comfort level			42.1	44.7	3.35

While the mean is high for each of these factors, it should be noted that a third to more than two thirds of the students selected “Very Important” for all of the factors and only a small percentage of students selected “Not Important” for any of the factors (with five of the eight receiving no responses of “Not Important”). Interestingly the two highest percentage selections for the “very important” response were for “time management of the student” and “motivation of the student” – both characteristics of self-directed learning traditionally attributed to adult learners.

### Discussion

As this study was the fifth sample of participants to have completed this survey, there are a number of comparisons that can be made between the different groups (see Tables 4, 5, 6 and 7 for complete results from these other studies). For example, the secondary students found the virtual classroom to be the most helpful tool, which was consistent with the corporate population from South Korea. By contrast the American corporate population rated their virtual classroom as the least helpful tool and this tool was not even used with the two post-secondary populations (see Table 4).

*Table 4.* Helpful tools in their online learning

Internet tool	Virtual School	Post-Secondary	United States Corporate	South Korean Corporate
Virtual Classroom	4.82	-	2.11	3.91
E-mail	4.00	4.40	3.49	2.38
Discussion Forums	3.24	3.37	3.02	2.61
Interactive Items	3.03	-	2.61	2.25
File Transfer Protocol (FTP)	3.03	3.05	-	-
Audio Clips	2.84	-	3.00	3.84
Chat	2.74	3.20	2.57	1.53
Video Clips	2.50	-	3.04	3.72

The secondary students also rated the use of e-mail as a highly helpful tool, which was consistent with the views of the American corporate and the two post-secondary populations (which is contradictory to Petrides' (2002) and Vonderwell's (2003) claims that post-secondary students were dissatisfied with the length of time required for e-mail interactions. The post-secondary students also thought highly of the flexibility and convenience offered by online learning, neither of which was raised by the secondary students in this study (Song et al., 2003).

In comparing the results of this study with earlier studies conducted by this research group, Jones et al. (2004a) found that corporate trainees in the United States indicated that e-mail, video, discussions forums, and audio were their most useful tools, while South Korean corporate trainees indicated the virtual classroom, audio, video, and discussion forums were their most useful tools (see Table 5).

Table 5. Challenging tools in their online learning

Internet tool	Virtual School	Post-Secondary <sup>1</sup>	United States Corporate	South Korean Corporate
Virtual Classroom	5.3	-	12.1	18.6
E-mail	0	0	3.4	6.8
Discussion Forums	21.1	30.3	12.1	22.0
Interactive Items	15.5	-	10.3	42.5
File Transfer Protocol (FTP)	23.7	35.5	-	-
Audio Clips	18.4	-	10.3	5.1
Chat	21.1	13.2	10.3	20.3
Video Clips	15.8	-	8.6	5.1

Two of the four most useful tools identified by the secondary students in this study were the same as both of these groups: e-mail and discussion forums with the United States trainees and the virtual classroom and discussion forums with the South Korean trainees. It should be noted, however, that audio and video were in the four most helpful tools for both groups of trainees, but were at the bottom of the list for the secondary students.

In terms of problems encountered, there was a higher degree of consistency between the secondary students, the post-secondary students, and at least one group of corporate trainees. The main problem identified by all of these groups was the presence of technical problems. The only group that wasn't consistent with this trend was the South Korean corporate trainees, who indicated that the lack of a sense of community was their number one challenge. The lack of a sense of community was also the second most identified problem with the post-secondary students, particularly with those who were novice learners and those learners who were dissatisfied with their online learning experience (Singleton et al, 2004), however, this was not a concern shared by the secondary students.

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<sup>1</sup> In previous versions of the survey this question was not presented in the form of a Likert scale, rather participants were simply asked which of these tools they had difficulty in using for their online course and the data indicates the percentage of students who indicated "Yes".

Table 6. Problems encountered in their online learning

Problem	Virtual School	Post-Secondary	United States Corporate	South Korean Corporate
Technical problems	71.1	58.0	43.1	16.9
Lack of time	50.0	23.2	20.7	25.4
Difficulty understanding goals/objectives of the course	34.2	34.8	27.6	16.9
Can't find the information I need in order to be successful	15.8	-	12.1	30.5
Lack of sense of community	13.2	46.4	22.4	66.1
Lack of adequate Internet knowledge	2.6	-	5.2	0
Other – can't always get in contact with the instructor	7.6	-	-	-
Other – slow Internet connection	2.6	-	-	-
Other – large classes	2.6	-	-	-

The secondary students concern about difficulty understanding goals and objectives was consistent with sentiments expressed by students in Smart and Cappel (2006) about the lack of detailed directions for activities and assignments, but this was not reflected in the population of post-secondary students examined earlier by our research group (Singleton et al, 2004). Also, concerns about the immediacy of responses from the instructor or the lack of a sense of community were only minor concerns to the secondary students compared to some of the other populations.

When examining the factors learners felt were important for success in the various web-based environments, there was also a high degree of consistency between the populations included in the various studies conducted by our research group.

Table 7. Factors important for success in their online learning

Factor	Virtual School	United States Corporate	South Korean Corporate	Post-Secondary <sup>2</sup>
Clear objectives	3.42	4.33	3.71	-
Well-organized content	3.67	4.62	4.42	84.2%
Exercises	3.24	3.91	3.54	-
Quizzes	3.11	3.47	2.88	-
Tutor Feedback	2.83	3.70	3.66	-
Motivation of the student	3.62	4.09	4.24	77.3%
Time management of the student	3.78	4.17	3.86	76.3%
Technology comfort level	3.35	3.76	3.63	78.9%

In fact, all four groups of learners scored “well organized content” near the top of the most important factors necessary for success, with the post-secondary students and both groups of corporate trainees scoring it as the highest factor and the secondary students scoring it as the second highest factor. In follow-up interviews conducted with the corporate trainees, the issues of time management and motivation were also found to be important factors. These factors were rated as the third and fourth most important factors by the post-secondary students, while the secondary students ranked them as the most and third most important, respectively. It is not surprising to see these factors high on the list with the three adult populations, as these characteristics are commonly associated with the nature of independent or self-directed learning – a skill necessary for engaging in studying at a distance according to Moore (1972, 1973, 1983, 1993; Moore & Kearsley, 1996). It should be noted that due to the lack of variance in responses to the question that asked what factors were important for success in a virtual school course, this was an important area to address in the interview study that followed this investigation. Finally, the secondary students and both corporate populations rated exercises, quizzes and tutor feedback at the bottom of the most important factors.

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<sup>2</sup> Similar to the data presented in Table 5, in the original version of the survey administered to the post-secondary sample this question was not presented in the form of a Likert scale.

## Conclusions and Implications

Cognitive psychologists, such as Piaget and Vygotsky, have argued that the ability of adolescents to learn in independent learning environments is less than that of adult learners because of differences in their development. However, the reality of the challenges being faced by rural schools forces more and more secondary school students into these independent learning environments. What is probably best illustrated by this initial study into secondary student perceptions of the helpful and challenging characteristics of learning in this type of environment is the consistency in the views on which factors are the important for success between the secondary students and the various adult populations. While there were slight differences in the tools that secondary students found useful and challenging compared to their adult counterparts, how to best situate themselves for success remains relatively the same – ensure that learners are provided with well designed and organized content, along with providing them the time management and motivational skills to be able to work effectively in this independent environment.

While many adult learners may already possess these skills, based upon most cognitive development theories many adolescent learners probably do not (Cavanaugh et al., 2004). This means that more will need to be done at the secondary school, and even middle school level, to prepare students for learning in these environments (Rice, 2006; Roblyer, 2005). This is particularly true in rural jurisdictions, where many students do not have a choice as to whether or not to enroll in these virtual school courses because this is the only means that they have to access these courses.

Future research needs to begin to address the issue of what constitutes a well designed and well organized web-based course for an adolescent learner. As has been illustrated in this

study, the useful tools that work for adult learner, and the areas that adult learners find necessary in their online learning may not be appropriate for an adolescent audience. More studies need to be conducted on what components of web-based design secondary students find useful towards their learning (Roblyer & Elbaum, 2000). In addition to issues of design, additional research will need to be conducted on how to evaluate the level of self-directed learning skills that secondary students possess and how we can provide opportunities for them to strengthen areas of weakness prior to engaging in independent learning opportunities such as virtual schooling (Roblyer & Marshall, 2002-2003). With the continued proliferation of these opportunities for students in secondary schools, and even in middle and elementary schools, the practice of virtual schooling is far outpacing the constructive research being conducted. This needs to be corrected before virtual school opportunities become something that only students who already possess these self-directed learning skills are able to access.

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## Appendix A

1. How many web-based courses have you completed? \_\_\_\_\_

2. Were you satisfied with all of your experiences in these web-based courses?

very dissatisfaction      equally satisfaction      very satisfaction  
 1                              2                              3                              4                              5

3. How difficult were your web-based courses in general compared to face-to-face course?

less difficult                      equally difficult                      more difficult  
 1                              2                              3                              4                              5

4. Are you satisfied with your experience in these web-based courses as compared to learning in a face-to-face course?

less satisfied                      equally satisfied                      more satisfied  
 1                              2                              3                              4                              5

5. Which of the following technologies did you use while of taking web-based courses? Circle all that apply.

E-mail	Chat	Discussion Forums	Interactive Items
Audio Clips	Video Clips	File Transfer Protocol (FTP)	Virtual Classroom (e.g., vClass)

6. How did the following tools help you in your web-based courses? Circle the most appropriate response.

<b>Internet Tool</b>	<b>Never</b>		<b>Sometimes</b>		<b>Very Often</b>
E-mail	1	2	3	4	5
Chat	1	2	3	4	5
Discussion Forums	1	2	3	4	5
Interactive Items	1	2	3	4	5
Audio Clips	1	2	3	4	5
Video Clips	1	2	3	4	5
File Transfer Protocol (FTP)	1	2	3	4	5
Virtual Classroom (e.g., vClass)	1	2	3	4	5

7. Which of the following Internet tools did you find challenging in your web-based studies?  
Circle all that apply.

E-mail	Chat	Discussion Forums	Interactive Items
Audio Clips	Video Clips	File Transfer Protocol (FTP)	Virtual Classroom (e.g., vClass)

8. What problems have you encountered while taking web-based courses? Check all that apply.

- lack of adequate Internet knowledge
- can't find the information I need in order to be successful
- lack of time
- technical problems
- lack of sense of community
- difficulty understanding goals/objectives of the course
- other (please list as many as applicable): \_\_\_\_\_

9. Why did you decide to take an online course? Check all that apply.

- convenience (I don't have to travel to school)
- this is the only way it is offered
- I wanted to try a web-based course
- a required course
- other

10. How did you learn about your web-based course?

- from the class schedule
- from an instructor
- from a friend
- other (how?) \_\_\_\_\_

11. Overall, I am satisfied with taking web-based courses.

- Yes
- No

12. Which factors are important for success in a web-based course? Circle the appropriate response.

<b>Factor</b>	<b>Not Important</b>	<b>Somewhat Important</b>	<b>Important</b>	<b>Very Important</b>
Clear objectives	1	2	3	4
Well-organized content	1	2	3	4
Exercises	1	2	3	4
Quizzes	1	2	3	4
Tutor Feedback	1	2	3	4
Motivation of the student	1	2	3	4
Time management of the student	1	2	3	4
Technology comfort level	1	2	3	4

13. Where do you access the Internet?

<input type="checkbox"/> School	<input type="checkbox"/> Library (public or university)
<input type="checkbox"/> Home	<input type="checkbox"/> Internet café
<input type="checkbox"/> Friend's home	<input type="checkbox"/> Other (please list):

14. How many hours did you spend on your online courses over the period of a week (seven days)?

- Less than 2 hours                       11-14 hours  
 3-6 hours                                       More than 15 hours  
 7-10 hours

15. What is your gender?

- Female  
 Male

16. What is your grade?

- Grade 9  
 Level I  
 Level II  
 Level III  
 Level IV

17. What is your age?

- 15
- 16
- 17
- 18
- 19
- Over 19

18. Are you willing to participate in a follow-up interview?

- Yes (please provide your name and e-mail address below).
- No

Name: \_\_\_\_\_

E-mail: \_\_\_\_\_