

Narratives from the Online Frontier: A K-12 Student's Experience in an Online Learning Environment

Michael Barbour, Jason Siko, JaCinda Sumara, and Kaye Simuel-Everage
Wayne State University, Detroit, Michigan, USA

Despite a large increase in the number of students enrolled in online courses, published research on student experiences in these environments is minimal. This article reports the narrative analysis of a series of interviews conducted with a female student at a brick-and-mortar school enrolled in a single virtual school course. Her narratives describe a student who often struggled with the content in her online course and was reluctant to interact with her online teacher. When she interacted with people online, it was using text, because she was shy and the hardware often did not work. Darlene's experiences, likely typical of many K-12 online students, highlight a system in need of better strategies for the design and delivery of its educational opportunities. Key Words: Online Learning, Distance Education, Rural Schooling, Virtual Schooling, Narrative Analysis.

The first virtual schools in Canada were EBUS Academy and New Directions in Distance Learning in British Columbia in 1993 (Dallas, 1999). Seventeen years later, Barbour (2010) reported that almost every province and territory had some form of virtual schooling. Clark (2000) defined virtual schools as "a state approved and/or regionally accredited school that offers secondary credit courses through distance learning methods that include Internet-based delivery" (p. i). Like other forms of K-12 distance education, virtual schooling stemmed from a need to provide equal educational opportunities to students in rural areas (Haughey & Muirhead, 1999). In these instances, students were usually enrolled in their physical (or brick-and-mortar) school and would login to a school computer in the resource center or a computer lab and complete their online course(s). While this supplemental model is still the dominant delivery model in Canada, there are also virtual schools that offer full-time opportunities (i.e., where students do not attend a brick-and-mortar school, but complete all of their schooling online).

Even with the growth in the practice of virtual schooling, the amount of published literature related to virtual schooling in Canada – and elsewhere – is limited (Cavanaugh, Barbour & Clark, 2009; Rice, 2006). The limited research conducted to date has focused on the act of teaching in a virtual school environment (e.g., Barbour 2007a; Murphy & Coffin, 2003; Nippard & Murphy, 2007) or the implementation of virtual schooling within the brick-and-mortar environment (e.g., Barbour & Mulcahy, 2004; Mulcahy, 2002; Stevens, 1997). Given that the practice of virtual schooling has outpaced the availability of useful research, clearly more research is needed and the first level of examination should focus on better understanding the student experience in the virtual school environment. As such, the purpose of this narrative analysis was to investigate the student experience in the K-12 virtual school environment.

Literature Review

In their review of the virtual schooling literature, Barbour and Reeves (2009) wrote that there was a deficit of rigorous research related to virtual schooling, and most of the literature focused on the opinions or experiences of virtual school practitioners. Cavanaugh et al. (2009) described the body of published literature as “focusing on... the roles of teachers and administrators, the promise of virtual schooling and its initial rationale for implementation, administrative challenges, the technology utilized, and interact with students” (Conclusions and Implications, ¶ 1). What has been largely neglected is any investigation of the experience of students who enroll in the virtual school environment. At present, the only published research found describing the experience of students engaged in virtual schooling has been Tunison and Noonan (2001) and Barbour (2008). Tunison and Noonan studied 50 students enrolled in a district-based cyber school in Saskatchewan, while Barbour studied 38 students in a provincial virtual high school in Newfoundland and Labrador.

Tunison and Noonan (2001) reported that, “students were generally satisfied with their online learning environment and experiences” (p. 507). In particular, the authors indicated that students enjoyed the autonomy and freedom of the virtual school environment. For example, the virtual school environment gave students the ability to work ahead or, in instances where the students fell behind in their work, the flexibility to catch up on activities and assignments without penalty. While students used a variety of asynchronous communication tools, Tunison and Noonan stated that the students found these tools a poor substitute for the kind of interaction that occurred in the face-to-face environment. This unhappiness with the nature of online interaction, along with the independent nature of learning, may explain why students report they learned best when working together with the other online students at their local school site. Finally, Tunison and Noonan found that students were concerned the level of autonomy might require too much independence when there was no local teacher monitoring their virtual course. This placed a great deal of responsibility on the students, particularly in a context where the students felt their virtual school course was more work than their face-to-face courses.

Similar to Tunison and Noonan (2001), the vast majority of students surveyed by Barbour (2008) indicated that they were satisfied with their virtual school course. This satisfaction was largely due to the communication tools (i.e., virtual classroom, e-mail, and the discussion forums), which were rated as the three highest items in a list of helpful tools. It is important to note that the virtual classroom was rated as the highest of these tools, given the focus on synchronous instruction by the virtual school in Newfoundland and Labrador (contrasted with the students who were frustrated by the asynchronous communication tools in the virtual school in Saskatchewan). Similar to Tunison and Noonan, Barbour found that students felt their virtual school courses had a heavier workload than their face-to-face courses. Barbour also reported that students indicated technical problems and a lack of time to complete their work were primary concerns. Unfortunately, this is most of what is known about the student experience in virtual school environments based on the published research.

Simply put, while there is a growing body of literature related to K-12 students engaged in virtual schooling, the vast majority of that literature is focused on virtual school practitioners. If we examine only the research literature, there are very few studies

that have explored the student experience. In their investigation of a primarily asynchronous virtual school, Tunison and Noonan (2001) found that students enjoyed their virtual schooling experience, particularly the freedom and autonomy that the environment provided. However, Tunison and Noonan did find that the students struggled with the asynchronous communication tools, and also that a small number of students reportedly questioned the level of independence required by the autonomy of the virtual school environment. Similarly, Barbour (2008) also found that students in a primarily synchronous virtual school enjoyed their learning experience, although in this instance satisfaction was primarily due to the communication tools. Students in Barbour's study were disappointed with the perceived increase in workload and the lack of time to complete this work, along with the numerous technical difficulties they experienced. Therefore, this narrative analysis was conducted to increase what is known of the student experience in the K-12 virtual school environment

Role of the Researcher

The data for this article were actually collected as a part of Michael's (lead researcher) dissertation study, which examined the nature of virtual schooling in Newfoundland and Labrador secondary education (Barbour, 2007b). The data from the participant this article are focused on, along with the data from three other participants, were excluded from the dissertation because I (Michael) was unsuccessful in scheduling all of their interviews (and was able to collect complete data sets from the other eight participants).

I had been actively involved in the development of virtual schooling in the Province of Newfoundland and Labrador, as the leader of a district-based program and, later, a district-based administrator and course developer in the province-wide virtual school where this research occurred. In addition to my involvement with this virtual school, I had many family ties to the community where the research occurred and, even, had relatives who worked at the school. A former rural school teacher myself, I had a first-hand opportunity to see the potential virtual schooling offered to students who often did not have the same curricular opportunities as their urban and suburban counterparts. However, I also often saw students struggling in the largely independent learning environment provided by virtual schools. Given these two realities, I can best be described as a supporter of the potential of virtual schooling, but cautious about its actual implementation.

My three co-authors, Jason, JaCinda, and Kaye, were doctoral students enrolled in my qualitative data analysis course. As a part of this course, students were asked to apply various types of qualitative analysis – such as inductive analysis, grounded theory, discourse analysis, and others – to existing data provided by me, as the instructor (as none of the three students had data of their own to use). The three doctoral students used different data to practice applying each of these methods of analysis (e.g., the students did not have access to the data in this article prior to beginning their narrative analysis). The three doctoral student co-authors did not have a role in the design or implementation of the actual research study used to collect the original data in this article.

Methodology

The data reported in this article were collected as a part of a larger study to investigate how students interacted with their virtual school courses and the processes they undertook when they needed help (Barbour, 2007b). The study, which received Institutional Review Board approval from the University of Georgia, was conducted during the 2005-06 school year at Beaches All Grade (a pseudonym), a rural school with approximately 100 students and a staff of fifteen teachers that had students enrolled in the province-wide virtual school since it was first created (and had been involved in previous distance education programs, as well). The larger study utilized a case study methodology (Stake, 1995), and had a total of twelve participants.

The final reporting of that study included the data from only eight participants. One of the participants excluded from the analysis was Darlene (another pseudonym), who was interviewed three times over a span of four months (please see Appendix A for a copy of the interview protocol).

Process of Narrative Analysis

As the instructor of a doctoral qualitative research course, I assigned my students (i.e., Jason, JaCinda, and Kaye), three articles describing narrative analysis, Cortazzi (2001), Labov (1972), and Mishler (1995), to both introduce them to topic of narrative analysis and to provide them with a model (i.e., Labov's model of abstract, orientation, complication, evaluation, resolution, and coda) to use in their narrative analysis. I gave Jason, JaCinda, and Kaye the transcripts from Darlene's three interviews and asked them to review the first transcript for what they felt were narratives using the Labov (1972) model. One week later, we four met to go through the first transcript and determine which narratives were true narratives, according to Labov's six components of a narrative). This group session also provided the students with an opportunity to compare notes and either confirm or refute their initial understanding of narrative analysis. At the conclusion of this group activity, I gave Jason, JaCinda, and Kaye an additional two weeks to analyze the second and third transcripts. At the end of this two-week period, we met again to collate the narratives the students had identified and discuss each one to determine whether it actually met all of the requirements of a narrative based on the Labov model

The students initially identified a total of 77 narratives; although this was refined to 19 narratives in the final group analysis (see Table 1).

Table 1. *Number of Narratives Initially Identified by the Doctoral Students in Each of Darlene's Interviews*

Doctoral Student	Interview 1	Interview 2	Interview 3
Jason	15	10	7
JaCinda	13	11	6
Kaye	6	5	4
<i>Final Group Result</i>	9	5	5

The interview protocol was not planned to be analyzed using narrative analysis in the original dissertation study, which may explain why there was such variability in the students initial attempts to identify narratives in the interview transcripts (as some tried to create narratives that were missing one of Labov's (1972) six components, while others created narratives by excluding significant amounts of interview text between each component).

While not designed to generate narratives, the protocol did yield a number of narratives. The questions related to class time in Darlene's schedule when she was allotted time to interact in a synchronous virtual classroom and with asynchronous course content contained in a learning management system (questions 5 and 6), as well as the process she went through when she needed help (question 7), were particularly useful in generating these narratives. For example, in respond to question 6, "Think back to your last offline class. Describe for me what you did." the narrative described in Table 2 was generated:

Table 2. *Narrative 2-3: A Narrative about What Darlene Did During Her Last Asynchronous Class*

Abstract	<i>think back to your last offline class (740)</i>
Orientation	<i>if I'm a fly on the wall watching you during that class, what do I see? (740-741)</i>
Complication	last offline class that we had, the power went off (743)
Evaluation	<p>we never had anything to do because we had our assignments passed in and we just going over the novel , so we basically sat around talking to each other and I was taking pictures with my camera. (744-746)</p> <p>he never assigned us any other work, so, still hasn't except that we got one question and I'm doing that tomorrow because report cards are soon coming out, so he's not assigning nothing else until after Easter, except for the test, so we never had nothing to do, we could have studied but never done that (laughs), so we just talking about this and that, and some people were on MSN, I think, no we weren't on MSN because the computer wouldn't connect. (750-755)</p>
Resolution	<p>For the whole class, we were just sitting around talking to each other, complaining because the power was off and we were missing class and I was taking pictures (laughs). (759-761)</p> <p>And we're, we're doing stuff on grad book too, that day. (765)</p>
Coda	That was a fun free period (laughs). (777)

(Note: Text in italics indicates the interviewer's comments, and the numbers in parenthesis indicate the lines in the interview transcript.)

The students operationalized Labov's (1972) six components in this manner:

1. Abstract – an overview of the context
2. Orientation – a description of the setting, actors, and/or plot
3. Complication – a statement of the problem or challenge
4. Evaluation – an elaboration of the complication and the potential courses of action
5. Resolution – a statement of what the actors in the setting did to address the complication
6. Coda – an indication that the narrative has concluded, often a throw-up comment or statement.

Once the group had finalized the narratives from the transcripts, Jason, JaCinda, and Kaye, looked for common trends within these narratives. This was accomplished by asking the students to read through the narratives and simply respond to the question: "What is Darlene talking about in this narrative?" These trends were not intended to be a thematic analysis, simply a way to categorize what Darlene's narratives focused on.

Darlene

As Darlene was the sole provider of data for this study, it is useful to understand who she was as a student attending a rural school, engaged in a virtual school course. Living next door to her parents with her elderly grandmother, Darlene was probably the only true digital native among the group of students taking virtual school courses in her school (Prensky, 2001). Even with only dial-up Internet access, the telephone at Darlene's grandmother's home was typically connected to the Internet. A regular user of instant messaging and her Windows Live Space (i.e., a social networking site by Microsoft similar to MySpace), Darlene had many people from around the world whom she had never met, but whom she called "friends." She used her Windows Live Space area as a way to post hundreds of pictures that she had taken with her webcam or digital camera of herself, her friends and family, and scenery from where she lived. She also used the blogging features of Windows Live Space to express herself, ranging from simple entries about what was going on in her life, to poetry and short stories. In her own words, "I just like sharing my work; it's the way I express myself.... I'm not known for a whole lot except for my poetry, so I just likes [sic] people reading it.... I'm known as a writer."

One of the interesting things about Darlene was if someone were to meet her, he or she would not see an outgoing, expressive personality. Seeing her in the classroom and school corridors, this grade 12 student seemed quiet, even melancholy – which even she acknowledged, "I don't talk much, I'm loud and I laugh and I like to have fun, but I'm just quiet in school, I don't know why." The oldest student in her graduating class, Darlene shared a close relationship with her family and a small group of close friends. During the 2005-06 school year, she was enrolled in a single Language Arts course, having taken one CDLI course the previous year.

While Darlene was probably the most active Internet user of the other virtual school students at her school, she was unable to access the *Elluminate Live* software used for her synchronous lessons from her home computer. She was able to access all of the

necessary components of *WebCT* and said that, “I’m always in *WebCT*, this is how I gets [sic] most of my work in.”

Results

In addition to the identification of narratives (please see http://www.michaelbarbour.com/Darlene_Narratives.docx to review all 19 narratives), I asked Jason, JaCinda, and Kaye, what her narratives said about Darlene’s experiences in the virtual school course that she took through the CDLI. Jason, JaCinda, and Kaye, identified topics or issues raised in each of the narratives (see the “category” column in Table 3), then attempted to put those categories into general topic areas.

Table 3. *Analysis of Darlene’s Narratives*

Topic	Category	Narrative
Problems	Understanding content	1-2, 1-7, 1-9, 2-1, 2-4, 2-5, 3-2, 3-3
	Missing class	1-1, 2-1, 3-1
	Work load	1-4, 1-9
	Use of offline time	1-6, 2-3
	Collaborating with local peers	1-9, 3-1
	Contacting online teacher	2-5, 3-2
	Uselessness of online content	3-4, 3-5
Help from	Peers	1-1, 1-6, 1-7, 2-4, 3-1
	Online teacher	1-7, 2-4, 3-1, 3-2
	Google	2-4, 3-1
	Online content	1-7, 3-2
Technical difficulties	Hardware	1-3, 1-5, 2-1, 2-2, 2-3, 3-1
	Bandwidth/connection	3-3, 3-5
	Software	1-1
Teacher characteristic	Flexible	1-4, 1-5
	Lenient	1-4, 1-5
	Helpful	1-7, 3-3
	Not available/accessible	2-5, 3-2
Interaction	Direct messaging over talking	1-3, 2-2
	Quiet when confused	1-2
	Email	3-1
	Off-task	2-3
	Lack of	2-5
Personal	Quiet/Shy	1-2, 1-7
	Metacognition	1-8
Online content	Poor Design	3-3, 3-4, 3-5

As illustrated by the data in Table 3, the most dominant theme in Darlene's narratives was related to problems that she was having with her virtual school courses (and of those problems, not understanding the content was dominant).

For example, in Table 4, Darlene's narrative 1-7, Darlene was having difficulty understanding a play the students were supposed to have read for this particular synchronous class.

Table 4. *Darlene's Narrative 1-7*

Abstract	<i>think about a time during the past month, where you had trouble with the content of your CDLI course (699-700)</i> <i>where did you go for help? (704)</i>
Orientation	the, my students in the CDLI (706) The ones around me Kathy, Max, Dayna and Mya. (710) some of them really seems [sic] to understand it (714-715)
Complication	I'm too shy to ask the other students in the class (715)
Evaluation	I've asked sir, I've asked Bill Martin about it. (715-716) And he helped where possible that where I question, I ask questions in class it involves. (720-721) And he just told me to go to all the, he's got like notes written up on them. (725) And quotes and all that, so I just printed all that off and I went over it with Dayna and Kathy and everybody in there, explain it to me and now I've just got to read it over myself and actually read the play. (729-731)
Resolution	And if I've got anymore questions I'll go to Mr. Martin about it (735)
Coda	that's basically the two groups of people that I go to (735-736)

One of Darlene's problems was that even though the course is taught online, she was too shy to ask her online classmates for help. Instead she relied upon the students at her own school who were enrolled in the class with her and her online teacher for help. She also referenced online course content, in the form of notes that her online teacher had posted for the students, as another resource that she found useful.

This narrative also spoke to the other primary theme the students identified – the various sources of assistance that Darlene relied upon when she needed help. For example, in Table 5, narrative 2-4 Darlene described another situation where she required help understanding the content of the play *Macbeth*.

Table 5. *Darlene's Narrative 2-4*

Abstract	<i>Okay, alright, umm, think over the past month, so since the last time since we've talked, to a time where you've needed help with some of the content, describe for me the process that you went through to, to try to get that help? (861-863)</i>
Orientation	Make Kathy help me (865) <i>Okay, what was it, what was she helping you with? (867)</i> Macbeth (laughs). (869)
Complicating Action	<i>you had a question about some of the content in Macbeth (871)</i>
Evaluation	She showed me her questions, I read off those to get a sense of it, she gave me her notes so I could read off them, she explained the best she could and printed off more notes for me on the computer that she had from the, the whiteboard (878-880) they already, they're doing the same thing that I'm doing and they got a better grasp of, grasp of it than I did. (893-894) If I got to a teacher, I got to explain to them the questions, and explain what I don't get, and besides, with Kathy, how do you do this, is all I got to say and since she's doing the same thing she'll know what it is and she'll tell me if she understands it, and if she do, tell me what it's about. (898-901)
Resolution	If not, I'll ask teacher. (905) Or do research. (909) Google! (914)
Coda	Google has all the answers, and if it doesn't I'll cry. (922)

In this instance, Darlene first turned to one of her local classmates and then the online teacher. She indicated that if she was not able to understand the material after speaking and reading through her classmate's (i.e., Kathy's) notes, and if the online teacher was not able to help her, she relied upon Google. This process almost mirrored the order in which the students identified the topics/issues related to the process Darlene undertook when she needed help (e.g., local classmates or peers, then her online teacher, then Google, and, finally, the online content – as indicated in the previous narrative).

In addition to content-based difficulties, Darlene's narratives also focused on technological difficulties, particularly with the hardware. For example, in the narrative described in Table 6, Darlene had technical difficulties with the headset (i.e., combined headphone and microphone) she was using.

Table 6. *Darlene's Narrative 2-1*

Abstract	<i>think back to the last online class that you had (478)</i> <i>if I'm a fly on the wall watching you during that class, what would I have seen you do? (482-483)</i>
Orientation	Sit down, CDLI, trying to get my headphones to work, and going through my Macbeth play, trying to figure out where we were to. (485-486) We missed the class before because the power went out and we got kicked off the server, so we missed that online class and he went on so I was completely lost. (490-491)
Complication	<i>you're trying to get your headphones working, how long have they not worked? (493-494)</i> Ever since, ever since the beginning of the year, this is the fourth set of headphones that I've had. (496-497) The pair that they got me that sent out he to, cause [sic] I had the headphones from last year, but they didn't work, then he had to send me out two other ones. (501-502)
Evaluation	But other than that I just takes [sic] them off the rack and uses 'em [sic]. (506) But they don't work either, one of them got the left headphone gone and the other got the right headphone gone (510-511)
Resolution	I just said screw it I'm using this one, I can have hear him (511-512)
Coda	I'll just go deaf in one ear (512)

In fact, in five of the six instances where Darlene complained about hardware problems, the issue was related to her headset (the sixth time was an instance where the electricity went out, which is referenced in this narrative as part of the orientation).

The problems that Darlene described experiencing with her headphones also affected the way in which she, and other students, interacted in her virtual school course. In Table 7, Darlene indicates that she (and the majority of the students) interacted with their virtual school teacher and with their fellow virtual school students using the direct messaging or text-based chat that was available to her in the virtual classroom environment.

Table 7. *Darlene's Narrative 2-2*

Abstract	<i>are you interacting with the teacher and the other students? (524-525)</i>
Orientation	When he asks questions I'm always answering them, if I can figure them out or else because I haven't got a clue. (527-528)
Complication	Oh my mic has never worked, I've been able to talk to him twice, I

	don't think any of the headphones in our school works right (533-534)
Evaluation	But I think I've talked to him a total of two or three times. (540) I'm all, I hates [sic] talking on the mic. (548)
Resolution	I normally just types [sic] mine (553)
Coda	That's why no one usually uses the mic (566)

Based on this narrative, the rationale for this decision – or this action – is because her headset was not working; however, in other narratives Darlene indicated that it wasn't uncommon for students to say that their headsets weren't working to get out of speaking in the virtual classroom.

Table 8 describing Narrative 3-1 summarized some of the topics/issues in each of three main themes (i.e., Darlene experiencing trouble understanding the content, Darlene experiencing technical difficulties with the hardware, and Darlene turning to her fellow students for help).

Table 8. *Darlene's Narrative 3-1*

Abstract	<i>think about a time where you've needed help with some of the contents of your CDLI course, can you describe to me the process that you went through ton get that help? (269-272)</i>
Orientation	I Google it and get some information then I'd ask Kathy to explain it to me (laughs). (278-279) <i>If Kathy didn't know the answer or if she was only able to give you half the story what would your next strategy be? (287-288)</i> I sit there in one class mainly just before the test I'd sit there and ask the crowd to explain it to me (290-291) If I knew as much as I did on my sheets then I'd study over that for a little bit (295)
Complication	<i>so you wouldn't typically say contact your online teacher for help? (302-303)</i> Naw. (305) I don't know why, it's just something about the computer, I can't do it. (309)
Evaluation	It's like they expects me to talk through the mic and I can't do that either, my mic don't work. (313-314) the only time I emails [sic] him is if my assignments are late or something like that there (319-320)
Resolution	I might explain why and that I'd have it in soon (320-321)
Coda	I just tells [sic] him that I was sick and that I'm sorry I missed so many online classes (321-322)

This narrative illustrated a problem Darlene had because she missed the previous class. She began her process of getting help by searching on Google, then turned to Kathy and her other local classmates. Darlene claimed that the reason why she didn't ask her online teacher for help was because her headset was not working. If she had missed an assignment deadline, she would have e-mailed her online teacher – but otherwise she relied upon her peers or Google.

While her online teacher may not have been her primary source for help, Darlene describes in Table 9 that she did view her online English language arts teacher in a positive light, referring to Mr. Martin as flexible and lenient.

Table 9. *Darlene's Narrative 1-4*

Abstract	I'm a bit late on most of my assignments (368-369)
Orientation	some people don't have their homework in, like me (368)
Complication	Cause work is piled on every night (373)
Evaluation	try to get it all done, but I gets 'em [sic] on time, if, or a little bit after (373-374)
Resolution	he just says some people haven't got homework in and he'd like to see everyone get it in by such and such a date (378-379)
Coda	so I can still get a good mark (374)

In other narratives Darlene described her virtual school teacher as helpful. In fact, the only time Darlene referred to her online teacher in a negative manner was in reference to trying to contact him. In the narrative in Table 10, Darlene outlines that her only frustrations with the instructional interactions in her virtual school was her inability to have immediate contact with the teacher when needed.

Table 10. *Darlene's Narrative 3-2*

Abstract	<i>if there was something that you could change about either the things that he does or the stuff that you find in WebCT, what would it be? (461-462)</i>
Orientation	I likes [sic] the way WebCT is set-up, can't say there's really anything I'd change except actually asking the teacher to be able to help you (464-465)
Complication	just get a hold of the teachers easier. (471)
Evaluation	Cause sometimes when I did have a problem mainly, this was probably in writing in grade ten, I tried to get in and talk to him in an offline class and I sent him five or six messages and he wouldn't, he was away talking on the phone of something, and you didn't know, and you'd leave, get off again. (475-478) And you'd have no way of getting a hold of him, and you'd call it would be busy, just hard getting a hold of teachers (482-483)
Resolution	I know some people in this class and other online classes got the same problem sometimes. (483-484)

Coda	Trying to get a hold of teacher. (488)
------	--

As Darlene described in this narrative, sometimes when she wanted to contact her teacher, she would have to e-mail him multiple times in order to get a response. Other times she would log-into the virtual classroom hoping to catch him there. She even called him on the telephone and received a busy signal.

Through the 19 narratives that Darlene told, she spoke of a variety of situations that allowed us to better understand how she experienced virtual schooling in her rural school. Like many K-12 students, she spoke of problems that she experienced with learning the course content, and the methods that she used to go about solving those problems (including the tools she used to interact with those individuals who she sought help from). Darlene also spoke of numerous technical difficulties, particularly those involving the hardware used to access her virtual school courses. Overall, Darlene portrays her experience as typical of what her fellow virtual school classmates at Beaches All Grade school would have experienced.

Discussion

The purpose of this study was to investigate the student experience in the virtual school environment. To accomplish this purpose we examined narratives from interviews with Darlene, a rural school student enrolled in a single virtual school course as a part of her overall K-12 schooling experience. Darlene's narratives paint a picture of K-12 online learning where the major problems that students experienced were, understanding the content, largely due to missed classes, and numerous technical issues, primarily related to the hardware used to access their virtual schooling. To overcome the content-based difficulties the students primarily turned to their local classmates for assistance, although there were some instances when Darlene and her fellow students would contact their online teacher or search for the answer on the Internet. When students did interact with their online teacher, who they perceived to be flexible, accommodating and helpful, (although often difficult to reach) they did so mainly during their synchronous classes using the direct or instant messaging feature in their virtual classroom. The decision to interact with their teacher using these media was due to the fact that the students seemed reluctant to "speak" to individuals that they did not know personally, and because their headsets were often broken. In addition to the broken headsets, Darlene also described numerous other technical difficulties they had to overcome – ranging from other problems with the hardware to problems with the bandwidth or connection and in some instances with the software.

This picture of virtual schooling, as painted by Darlene's narratives, has many similarities with what was known about the student experience, as reported by Barbour (2008) and Tunison and Noonan (2001). For example, Tunison and Noonan, who described the Saskatchewan students, also found the students' online interactions, which were primarily asynchronous in nature, a poor substitute compared with the face-to-face interactions they were accustomed to experiencing. The students in Tunison's and Noonan's study felt they worked best with the other online students at their local school site, which was consistent with Darlene's narratives. The interactions that Darlene seemed to value were the real-time or synchronous interactions that occurred in the

virtual classroom. This finding was consistent with the experiences of the other Newfoundland and Labrador students (Barbour, 2008), who were quite satisfied with their online course experience, largely due to the synchronous class time. Barbour also reported that students complained about the high number of technical difficulties, which would seem to mirror the experience described by Darlene.

One of the main themes reported by both the Tunison and Noonan (2001) and the Barbour (2008) studies was the overall enjoyment and satisfaction that the students expressed concerning their online course experience. While Darlene's experience appears to be a positive one, there is also no evidence of an overwhelming sense of enjoyment or satisfaction. Darlene's narratives describe a student who took the course in a virtual school environment simply because that was how it was offered, with no real discussion of whether, given a choice, she would have chosen that format (in fact, it was never mentioned in her narrative. Neither did Darlene express in any of the narratives a sense that she would have rather taken the course in a more traditional, face-to-face, classroom environment. Another difference between the student experiences reported by the two previous studies and Darlene's experience was the level of content-based difficulty that Darlene and her fellow online students reported experiencing. Both Barbour and Tunison and Noonan were silent on this issue of not understanding the course content, yet difficulty understanding course content was the main theme that emerged in Darlene's narratives. The difficulty in understanding course content could be due to the fact that Darlene was a C student, while much of the literature indicates that students who find success in the online environment tend to be the stronger students (Barbour & Reeves, 2009; Clark, Lewis, Oyer & Schreiber, 2002; Espinoza, Dove, Zucker & Kozma, 1999; Haughey & Muirhead, 1999; Kozma, Zucker & Espinoza, 1998; Roblyer, 2005; Roblyer & Elbaum, 2000; Watkins, 2005).

Concluding Thoughts

Barbour (2009) speculated that there appeared to be a higher percentage of K-12 students engaged in online learning that were not from the higher end of the student performance spectrum. As such, Darlene's experiences may be more representative of the experience of the majority of K-12 students learning in an online environment. This possibility raises concerns about the nature of the online experience, and in particular the quality of supports put in place for these students. If the vast majority of obstacles that online K-12 students, like Darlene, experience are related to not understanding the course content, and if these students also feel that their online teachers are difficult to contact, and that the asynchronous course content is poorly designed, there is something wrong with the design and delivery of the online education.

The fact that Darlene was able to rely upon her local cohort of other online students to overcome many of these obstacles was admirable – although not unexpected given the higher sense of community that often exists in rural school (see Kannapel & DeYoung, 1999). Most would agree that it would be unacceptable for a face-to-face teacher to simply present a lesson once, and then expect the students to be successful using only their textbooks and each other to find their way through the content. Similar to well-designed supports for face-to-face courses, virtual education need to be provided with systematic support for K-12 students learning in online environments. A systemic

approach to such support needs to include better management of the technology to reduce the technical difficulties that students experience, increasing opportunities for students to interact with and “get to know” their online teacher and fellow online students, making online teachers more accessible to students outside of their scheduled synchronous class time, and having local school personnel ensure that students miss fewer online classes and actually work during scheduled asynchronous class time.

References

- Barbour, M. K. (2007a). Principles of effective web-based content for secondary school students: Teacher and developer perceptions. *Journal of Distance Education*, 21(3), 93-114. Retrieved from <http://www.jofde.ca/index.php/jde/article/view/30>
- Barbour, M. K. (2007b). *What are they doing and how are they doing it? Rural student experiences in virtual schooling*. Unpublished Doctoral Dissertation. University of Georgia, Athens, GA.
- Barbour, M. K. (2008). Useful and challenging characteristics of virtual schooling: Secondary student experiences. *Quarterly Review of Distance Education*, 4, 357–372.
- Barbour, M. K. (2009). Today's student and virtual schooling: The reality, the challenges, the promise... *Journal of Distance Learning*, 13(1), 5-25.
- Barbour, M. K. (2010). *State of the nation study: K-12 online learning in Canada*. Vienna, VA: International Council for K-12 Online Learning. Retrieved from http://www.inacol.org/research/docs/iNACOL_CanadaStudy10-finalweb.pdf
- Barbour, M. K., & Mulcahy, D. (2004). The role of mediating teachers in Newfoundland's new model of distance education. *The Morning Watch*, 32(1-2). Retrieved from <http://www.mun.ca/educ/faculty/mwatch/fall4/barbourmulcahy.htm>
- Barbour, M. K., & Reeves, T. C. (2009). The reality of virtual schools: A review of the literature. *Computers and Education*, 52, 402-416.
- Cavanaugh, C., Barbour, M. K., & Clark, T. (2009). Research and practice in K-12 online learning: A review of literature. *International Review of Research in Open and Distance Learning*, 10(1). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/607>
- Clark, T. (2000). *Virtual high schools: State of the states - A study of virtual high school planning and preparation in the United States*. Macomb, IL: Center for the Application of Information Technologies, Western Illinois University. Retrieved from <http://www.imsa.edu/programs/ivhs/pdfs/stateofstates.pdf>
- Clark, T., Lewis, E., Oyer, E., & Schreiber, J. (2002). *Illinois Virtual High School evaluation, 2001–2002*. Carbondale, IL: TA Consulting and Southern Illinois University. Retrieved from http://www2.imsa.edu/programs/ivhs/pdfs/IVHS_FinalRpt.pdf
- Cortazzi, M. (2001). Narrative analysis in ethnography. In P. Atkinson, A. Coffey, S. Delamont, J. Lofland, & L. Lofland (Eds.), *Handbook of ethnography* (pp. 384-394). London: Sage.

- Dallas, J. (1999). *Distance education for kindergarten to grade 12: A Canadian perspective*. Presentation at the Pan-Commonwealth Forum, Brunei. Retrieved from <http://www.col.org/forum/PCFpapers/PostWork/dallas.pdf>
- Espinoza, C., Dove, T., Zucker, A., & Kozma, R. (1999). *An evaluation of the Virtual High School after two years in operation*. Arlington, VA: SRI International. Retrieved from <http://ctl.sri.com/publications/downloads/evalvhs2yrs.pdf>
- Haughey, M., & Muirhead, W. (1999). *On-line learning: Best practices for Alberta school jurisdictions*. Edmonton, AB: Government of Alberta. Retrieved from http://web.archive.org/web/20030312122537/http://www.phrd.ab.ca/technology/best_practices/on-line-learning.pdf
- Kannapel, P. J., & DeYoung, A. J. (1999). The rural school problem in 1999: A review and critique of the literature. *Journal of Research in Rural Education*, 15(2), 67-79.
- Kozma, R., Zucker, A., & Espinoza, C. (1998). *An evaluation of the Virtual High School after one year in operation*. Arlington, VA: SRI International. Retrieved from <http://ctl.sri.com/publications/downloads/evalvhs1yr.pdf>
- Labov, W. (1972). The transformation of experience in narrative syntax. In W. Labov (Ed.), *Language in the inner city: Studies in the Black English vernacular* (pp. 354-396). Philadelphia, PA: Philadelphia Press.
- Mishler, E. G. (1995). Models of narrative analysis: A typology. *Journal of Narrative and Life History*, 5, 87-123.
- Mulcahy, D. M. (2002). Re-conceptualizing distance education: Implications for the rural schools of Newfoundland and Labrador. *The Morning Watch*, 30(1-2). Retrieved from <http://www.mun.ca/educ/faculty/mwatch/fall02/Mulcahy.htm>
- Murphy, E., & Coffin, G. (2003). Synchronous communication in a web-based senior high school course: Maximizing affordances and minimizing constraints of the tool. *American Journal of Distance Education*, 17, 235-246.
- Nippard, N., & Murphy, E. (2007). Social presence in the web-based synchronous secondary classroom. *Canadian Journal of Learning and Technology*, 33(1). Retrieved from <http://www.cjlt.ca/index.php/cjlt/article/view/24>
- Prensky, M. (2001). Digital natives, digital immigrants—Part II: Do they really think differently? *On the Horizon*, 9(6). Retrieved from <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>
- Rice, K. L. (2006). A comprehensive look at distance education in the K-12 context. *Journal of Research on Technology in Education*, 38, 425-448.
- Roblyer, M. D. (2005). Who plays well in the virtual sandbox? Characteristics of successful online students and teachers. *SIGTel Bulletin*, (2). Retrieved from http://web.archive.org/web/20060930130650/http://www.iste.org/Content/NavigationMenu/Membership/SIGs/SIGTel_Telelearning_/SIGTel_Bulletin2/Archive/2005_20067/2005_July_-_Roblyer.htm
- Roblyer, M. D., & Elbaum, B. (2000). Virtual learning? Research on virtual high schools. *Learning and Leading with Technology*, 27(4), 58-61.
- Stake, R. (1995). *The art of case study research: Perspectives on practice*. Thousand Oaks, CA: Sage Publications.

- Stevens, K. (1997). The place of telelearning in the development of rural schools in Newfoundland and Labrador. *Prospects*, 4(4). Retrieved from <http://www.cdli.ca/Community/Prospects/v4n4/telelearning.htm>
- Tunison, S. & Noonan, B. (2001). On-line learning: Secondary students' first experience. *Canadian Journal of Education*. 26, 495-511. Retrieved from: <http://www.csse.ca/CJE/Articles/FullText/CJE26-4/CJE26-4-Tunison.pdf>
- Watkins, T. (2005). *Exploring e-learning reforms for Michigan: The new educational (r)evolution*. Detroit, MI: Wayne State University. Retrieved from <http://web.archive.org/web/20051208000848/http://www.coe.wayne.edu/e-learningReport.pdf>

Appendix A

1. Could you tell me a little about yourself?
Probes
What grade are you in?
How old are you?
Where do you live?
2. Could you tell me about the web-based courses have you taken?
Probes
How many?
Over how long a period?
Which ones? When?
3. What is your work area like at home?
Probes
Do you have a computer?
Is it located where you do most of your homework?
Does it have access to the Internet?
Are you able to use all parts of WebCT from your home computer?
Are you able to use ELive from your home computer?
Do you share your home computer with someone else in the family?
4. Could you tell me a little about your school?
Probes
What kind of school is it (i.e., what grades does it include)?
Roughly how many students are in your school?
5. Think back to your last online class. Describe for me what you did.
Probes
Did you take notes?
Did you talk to other students online?
Did you talk to other students in the room with you?
Did you do things other than pay attention to the Elluminate Live stuff?
Was this a typical online class?
If not, how was it different?
6. Think back to your last offline class. Describe for me what you did.
Probes:
Where do you complete your work?

- Where did you go?
 Would you say you were working on your course for most of that class?
 What percentage of time would you say you were on-task?
 Was this a typical offline class?
 If not, how was it different?
 Where would you normally go?
 Would you say you are working on your course for most of your offline classes?
 What percentage of time would you say you are on-task?
7. Think about a time during the past month when you felt you learned a specific concept or process or mastered a specific skill. Describe it for me.
Probes:
 What did you do first? Next?
 What was the last thing you did before you figured it out?
 What resources did you use?
 Recorded Elluminate Live sessions
 Course content in WebCT
 Your own notes
 Your textbook
 Different sites on the world-wide web
 Who did you seek help from?
 Your e-teacher
 An e-tutor
 Other students in that class
 Other students in your school
 Teachers in your school
 Your parents or relatives
8. What is it you like about your CDLI classes?
Probes:
 Do you prefer your CDLI classes or your classroom based classes? Why?
 Are your CDLI classes more work, less work or about the same compared to your classroom-based classes?
 Think of something from your classroom-based classes that you wish you had more of in your CDLI classes? Why?
 Think of something from your CDLI classes that you wish you had more of in your classroom-based classes? Why?
9. Is there anything else about your CDLI classes that you'd like to tell me about?
10. Is there anything else about where you go to for help with your CDLI courses that you'd like to tell me about?

Author Note

Michael Barbour is an assistant professor in instructional technology and education evaluation and research at Wayne State University. He has been a K-12 online learning researcher, teacher, course designer and administrator in several countries for

over a decade. Michael's research focuses on the effective design, delivery and support of K-12 online learning. Correspondence regarding this article can be addressed to Dr. Michael Barbour at E-mail: mkbarbour@gmail.com

Jason Siko was a second year doctoral student in instructional technology at Wayne State University when this article was written.

JaCinda Sumara was a fourth year doctoral student in instructional technology at Wayne State University when this article was written.

Kaye Simuel-Everage was a sixth year doctoral student in curriculum and instruction at Wayne State University when this article was written.

Copyright 2012: Michael Barbour and Nova Southeastern University

Article Citation

Barbour, M., Siko, J., Sumara, J., & Simuel-Everage, K. (2012). Narratives from the on line frontier: A K-12 student's experience in an online learning environment. *The Qualitative Report*, 17(Art. 20), 1-19. Retrieved from <http://www.nova.edu/ssss/QR/QR17/barbour.pdf>
