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# The Impact on Writing Skills of Tablets in College Developmental English Classes – Appendix

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## Appendix 1

### Survey – Experimental

The students were given the following range of options:

1 – Proficient, 2 – Intermediate, 3 – Neutral, 4 – No Knowledge, 5 – Unsure

- At the beginning of this semester – Experience with table computers/PCs
- At the beginning of this semester – Using internet to search for information
- At the beginning of this semester – Downloading files from MySeneca/ Blackboard or any online resource
- At the beginning of this semester – Using email to communicate with teachers
- At the beginning of this semester – Using word processing/Word to compose assignments
- At the beginning of this semester – Using mobile devices such as cell phone, iPad or Android phone

The students were given the following range of options:

1 – Strongly Agree, 2 – Agree, 3 – Neutral, 4 – Disagree, 5 – Strongly Disagree

- At this time – The tablet improved my note-taking skills
- At this time – Because of the tablets, I paid more attention in class
- At this time – Using a tablet computer changed the way I approach preparing writing assignments
- At this time – I found it easy to access my course material through MySeneca
- At this time – I feel that using Blackboard/MySeneca to access material helped me in being organized
- At this time – The tablet PC helped me improve my performance in this course
- At this time – Having work on the tablet displayed for the class improved my participation in class
- At this time – Using tablets in class was a better learning experience compared to other English courses I have taken
- At this time – Having a tablet PC in class helped me understand the course material better
- At this time – DyKnow was an effective tool for classroom presentation and note taking
- At this time – Having my notes available online was helpful
- At this time – Feedback assignments on DyKnow helped with my learning in this course

## Appendix 2

### Survey – Control

The students were given the following range of options:

1 – Proficient, 2 – Intermediate, 3 – Neutral, 4 – No Knowledge, 5 – Unsure#

- At the beginning of this semester – Experience with computers/PCs
- At the beginning of this semester – Using internet to search for information
- At the beginning of this semester – Downloading files from MySeneca/Blackboard or any online resource
- At the beginning of this semester – Using email to communicate with teachers
- At the beginning of this semester – Using word processing/Word to compose assignments
- At the beginning of this semester – Using mobile devices such as cell phone, iPad or Android phones

The students were given the following range of options:

1 – Strongly Agree, 2 – Agree, 3 – Neutral, 4 – Disagree, 5 – Strongly Disagree

- At this time – Using computers in class changed the way I approach preparing, writing assignments
- At this time – I found it easy to access my course material through MySeneca
- At this time – I felt that using Blackboard/MySeneca to access material helped me in being better organized
- At this time – Using computers in class helped me improve my performance in this course
- At this time – Using computers in class for preparing writing assignments was a better learning experience compared to other English courses I have taken

## Appendix 3

### Polling Feature in DyKnow

When the poll is activated, students vote anonymously and DyKnow tabulates the votes. Professor A conducted the poll to illustrate the idea of discovering meaning through context in the pilot classes in the Fall 2010 semester and in the experimental class in the Winter 2011 semester. In all three classes, it was observed that students were less capable of inferring the correct meaning of the words “disseminates” and “parity” without a context – roughly 20 to 30 per cent answered the question correctly without a context while over 80 per cent could do so with a context. Similar results were observed in the control group by a show of hands. The DyKnow poll activity allowed students to learn about reading through context in a more engaging manner. Furthermore, students in the experimental group were also less likely to be influenced by their peers since the activity made it possible to vote quietly, privately and anonymously.

The screenshot shows a text editing window titled "The Reading Process" with a poll question: "4. Use context clues to help you understand difficult words. E.g. Can you guess the meaning of these words? a) disseminates b) parity". Below the question, definitions and multiple-choice options are provided for both words. A "Launch Poll" button is visible at the bottom of each definition.

**Disseminates means**  
 A) destroys  
 B) prevents light from penetrating  
 C) distributes  
 D) disables

**parity means**  
 A) fairness  
 B) closeness  
 C) danger  
 D) equality

The screenshot shows the same poll question as above, but now with a table displaying the results of the poll. The table has columns for Answer, Count, and Percent.

Answer	Count	Percent
A) destroys	9	39
B) prevents light from penetr...	1	4
C) distributes	4	17
D) disables	7	30
N/A	2	9

Answer	Count	Percent
A) fairness	11	48
B) closeness	3	13
C) danger	2	9
D) equality	6	26
N/A	1	4

## The Impact on Writing Skills of Tablets in College Developmental English Classes

The screenshot displays a Blackboard LMS interface. The main content area is titled "The Reading Process" and contains a reading passage. The passage discusses Christina Hoff Sommers' argument in *The War against Boys* regarding gender equity and the use of the word "disseminates". Below the passage, there are two multiple-choice questions: one for the meaning of "disseminates" and another for the meaning of "parity". Each question has a "Launch Poll" button. The interface also shows a "Private Notes" sidebar on the right and a bottom navigation bar with icons for Private Notes, Chat, Filmstrip, and Animations/Timelines. The current tool is identified as "Full Panel Text".

Now see if you can figure out (or infer) the meaning of "disseminates" and "parity" by looking at these words within the context of the following paragraph.

Christina Hoff Sommers, author of *The War against Boys*, argues that boys are being neglected in order to help girls succeed in school. For years, she argues, feminist groups have spread myths about the disadvantaged girls, yet boys are actually the disadvantaged sex. The Department of Education **disseminates** hundreds of documents about gender equity, Sommers says. While the documents suggest ways to help girls succeed, none of them explain how educators can help boys achieve academic **parity** with girls.

Disseminates means

- A) destroys
- B) prevents light from penetrating
- C) distributes
- D) disables

parity means

- A) fairness
- B) closeness
- C) danger
- D) equality

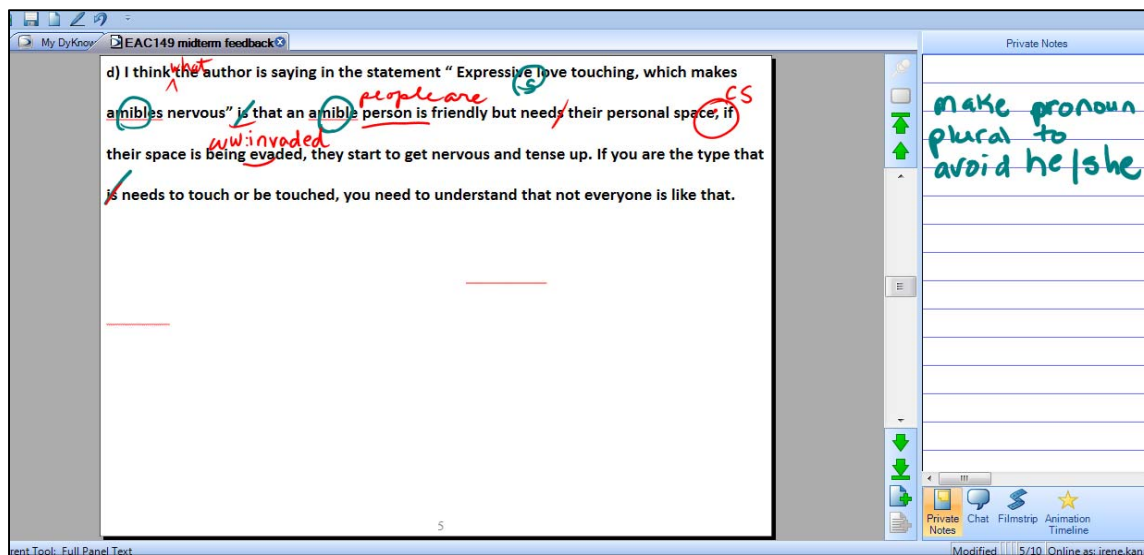
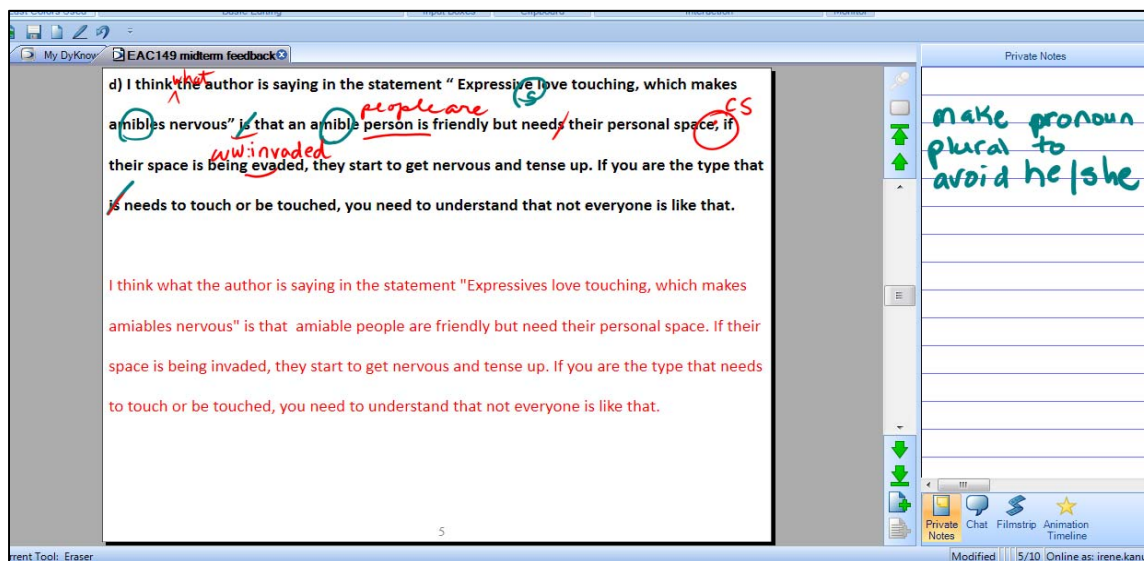
(Paragraph found on p. 546, *The Canadian Writer's World*)

urrent Tool: Full Panel Text

## Appendix 4

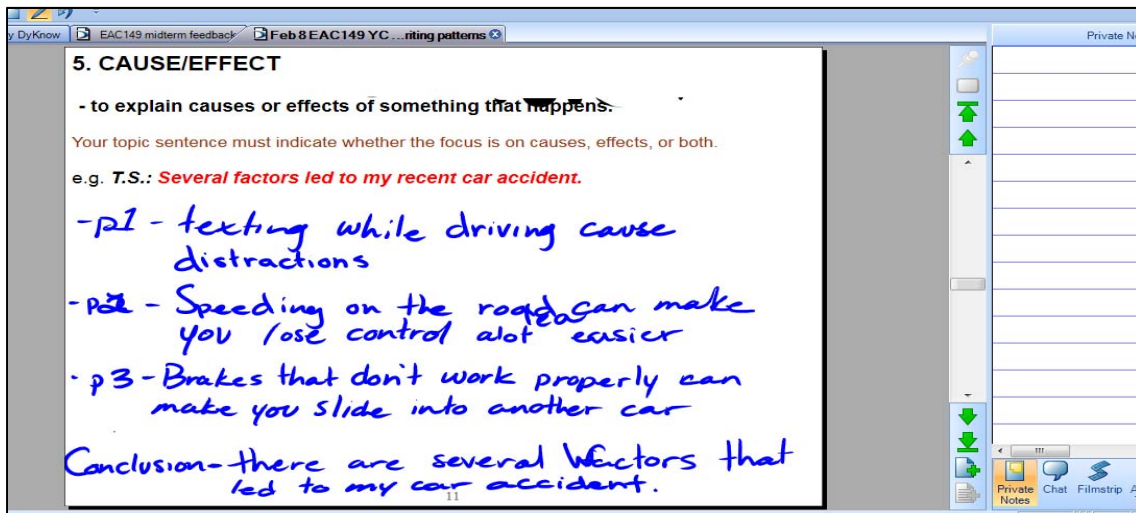
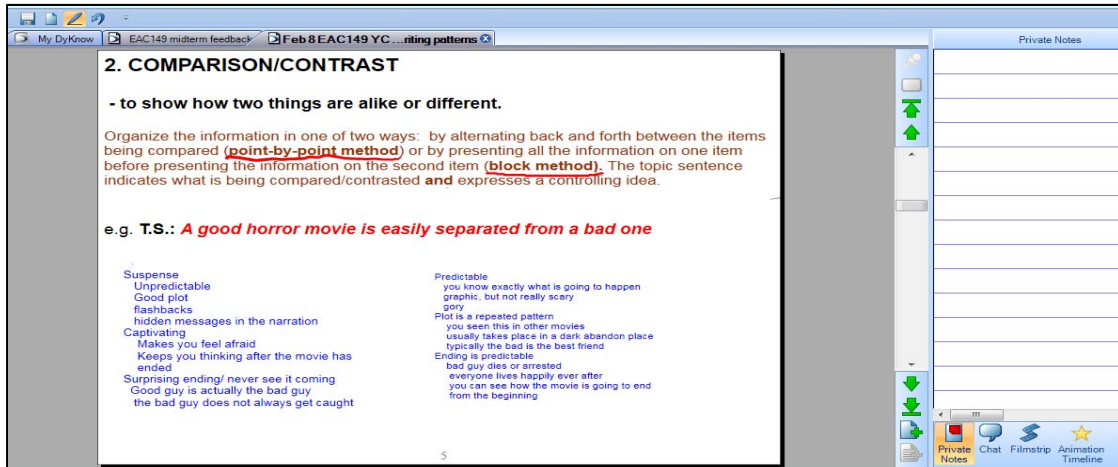
Appendix 4 Figure 1 shows a student's panel in DyKnow in the experimental class. Students were provided with an example of a classmate's answer to a question on the midterm. They were asked to identify any sentence errors using any ink colour but red. (Students' notes on pronoun use recorded during class discussion were placed in 'Private Notes'). The teacher added another series of corrections in red ink during class discussion. Corrections provided impetus for a discussion on the ways in which sentence and word errors diminish the value of an otherwise good response to the particular question on the midterm.

Figure 2 shows the same panel after the teacher has revealed a 'clean' version of the answer to the class. This version is hidden from the students with the use of the white ink in DyKnow and revealed by erasing the white ink in real time. This interactive exercise allows students to see and discuss the different effects of the two versions of the text, and to keep the original and the exemplar in their notebooks.



## Appendix 5

Appendix 5 depicts a brainstorming activity done in groups of two students using DyKnow's share control feature. Each group was instructed to develop a topic sentence incorporating a comparison or contrasting statement, a statement expressing cause and effect, or an argument, and each group engaged in a brainstorming session to develop its topic sentence. Each group then presented its panel to the class. Students saved all the panels in their notebooks. The control group completed the same activity using markers and the whiteboard in the classroom, and while the notes were presented and discussed in class by the control group, they were not recorded or saved.





The screenshot shows a tablet application interface. At the top, there are browser tabs for 'My DyKnow', 'EAC149 midterm feedback', and 'Feb 8 EAC149 YC...riting patterns'. The main content area is titled '7. ARGUMENTATION' and contains the following text:

- to persuade the reader to your way of thinking.
- State your position on the issue and be sure your topic sentence is a debatable statement. Support your point of view with examples, facts, statistics and informed (expert) opinions.
- e.g. T.S.: **Taking a cruise is a terrible way to spend a vacation.**
- Taking a cruise is a terrible way to spend a vacation because:
  - first of all, it is **overly expensive**, the cost to book a cruise trip is much more than flight tickets so not everybody can afford, especially for large families or groups.
  - Also, cruise trips are **limited in activities** and for the most part, travelers are **restricted to follow the program** so they **don't get much time or freedom** to enjoy on their own. Not to mention **sea-sickness** and bad weather conditions.
- Therefore, it is definitely not worth it to travel on a cruise for your vacation!

Handwritten notes in blue ink are present at the bottom of the page. On the left, there are several 'A's. In the center, there is a drawing of a cruise ship with a shark swimming below it. Next to the drawing, the text reads 'will meet shark!!!'. To the right of the drawing, it says 'this is a shark?'. The number '14' is written at the bottom center of the page.

On the right side of the tablet interface, there is a 'Private Notes' section with a list of horizontal lines. Below this, there are icons for 'Private Notes', 'Chat', 'Filmstrip', and 'Animation Timeline'.

## Appendix 6

Appendix 6 demonstrates the interactive quality of a presentation in DyKnow. The teacher's presentation is designed to encourage students to make notes during the discussion of the concepts. Students are prompted to fill in details, underline and/or highlight key concepts.

The screenshot shows a presentation slide titled "The Writing Process". The slide text includes: "Writing is a recursive process:", "Exploring-----Developing-----Revising and Editing", "Final product should be informed by the four elements of good writing:", "UNITY Topic sentence", "SUPPORT give evidence, concrete.", "COHERENCE all parts UNITE, connectors, smooth flow of ideas.", and "STYLE (including correct grammar and spelling) Sharp, clear, correct spelling, gram". Handwritten notes in blue ink are present on the slide and in a "Private Notes" sidebar on the right. The sidebar notes include: "recursive - going backward and forward.", "one paragraph one idea one sentence one thought", "Unit = Topic sentence.", "Support = giving evidence.", "Coherence = all parts unite", and "Style = sharp, spelling gram".

The screenshot shows a presentation slide titled "Bertrand Russell, 'What I Have Lived For'". The slide text includes: "Three passions, simple but overwhelmingly strong, have governed my life: the longing for love, the search for knowledge, and unbearable pity for the suffering of mankind.", "I have sought love, first, because it brings ecstasy -- ecstasy so great that I would often have sacrificed all the rest of life for a few hours of this joy.", "With equal passion I have sought knowledge. I have wished to understand the hearts of men.", "Love and knowledge, so far as they were possible, led upward toward the heavens. But always pity brought me back to earth.", "This has been my life. I have found it worth living, and would gladly live it again if the chance were offered me." Handwritten notes in red ink are present on the slide and in a "Private Notes" sidebar on the right. The sidebar notes include a large scribble, a heart, and the text: "anticlimactic. → climax" and "meaning = content + form".

## Appendix 7

Appendix 7 illustrates the way in which both teacher and student work together to add notes to the same panel in the DyKnow notebook. In this lesson on subject-verb agreement, students were asked to complete a short quiz before the teacher's presentation of the topic. The student's notes in blue ink are further annotated by the teacher's comments in red when the quiz is taken up in class. The DyKnow interface creates a simulation of a one-on-one teaching experience for each student.

The screenshot shows a digital notebook page titled "Subject-Verb Agreement" with a "Quick Quiz" section. The quiz contains five multiple-choice questions. The interface includes a toolbar on the right with icons for undo, redo, and other editing functions, and a bottom toolbar with "Private Notes", "Chat", and "Filmstrip" buttons. The page number "7" is visible at the bottom center.

**Subject-Verb Agreement**

**Quick Quiz**

1. The history of humankind's attempts to fly (goes, go) back hundreds of years. *Susan, my sister, loves English*
2. An ancient myth that describes men trying to fly with wings made of feathers and wax (has, have) been passed on. *S*
3. The famous inventor Leonardo da Vinci made designs for a helicopter that (was, were) very detailed. *single*
4. Every aviator who set a new flying record in the early years of flight (was, were) treated as a hero.
5. Not only the helicopters but also the jet engine (was, were) among the advances that occurred during the Second World War.

"Quick quiz", from Canadian Writer's Workplace, 8th ed., p. 47.

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## Appendix 8

Appendix 8 represents the stages of the writing process in an assignment completed by a student in the experimental group using DyKnow. The third image below shows the student's marked draft. The control group completed the same activity using paper and pen. The tablet allows for all the functionality of pen and paper during the various stages of writing with the added benefit of allowing a student to word process and store work in one place, including the final draft with the teacher's feedback.

whether or not laptops should be permitted in college and university classrooms?  
laptops should not be permitted

unreliable  
can crash anytime and all data will be lost

distraction  
students use internet for email and facebook  
hard to concentrate

expensive  
students already needs to buy textbooks  
also OSAP

paper is easier to take quick notes

laptop will have to be started and warm up w/ connection

Laptops

good

Generate supporting ideas and details for the topic sentence you have created. Circle your best supporting ideas in red. Next, highlight groups of supporting details in yellow, aqua, lime, etc... Then, draw lines and arrows to link them with the supporting ideas. Cross out any ideas or details that are not useful. Finally, number the ideas in the order in which they will appear in your paragraph.

Unreliable 2  
- laptops don't guarantee to not crash down and lose all data, it is capable of losing all documents and files anytime, hence why its not reliable.

Expensive 1  
- students who are full time dont always have money to afford luxuries such as laptops. most students rely to OSAP or student loans through banks. There are much more expenses which students have, so laptops is something they can avoid to save money.

Distraction 3  
- students who use laptops in class often get side tracked with other things on the laptops. instead of doing work assigned in class, they will be on facebook, email, or other use on the internet.  
- hard to concentrate

Time-Consuming  
- laptops need time to start up and then warm up once started. you will need to connect to wifi if using the internet. its hard to multitask while trying to listen to the teacher talking at the same time.  
- its hard to take quick notes when needed

well done!

# The Impact on Writing Skills of Tablets in College Developmental English Classes

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EAC149 YA  
September 23 2010  
Paragraph 1

Laptops interfere negatively in student's education when used in the classroom. Firstly laptops are expensive. A student has many expenses when attending college or university. Most students rely on OSAP or take a student loan through the bank to help them pay for their education, they also need to provide themselves with textbooks and other accessories for some courses. Therefore a laptop is an unnecessary expense for students; they could save money and put it towards their education. Secondly laptops don't guarantee the customer reliability. Laptops are capable of crashing anytime, as a result all documents and files can be lost. Lastly laptops cause distraction while using it in the classroom. Students who use laptops in the classroom often get side tracked with other applications on the laptops. They usually are surfing the net, on facebook or email, instead of doing the assigned work. In conclusion, laptops play a negative role in student's education while using it in the classroom.

CS  
awk  
plural or singular?  
while being used...

Good work, Bethan  
You have an excellent  
handle on structure  
and organization. A  
couple of instances  
of awkward wording:  
comma splice error

3/5

## Appendix 9

### Technology Feedback Survey: Using Computers to Assist Classroom Learning – EAC149

	Strongly Agree	Agree	Neutral	*Disagree	Strongly Disagree
At this time – The tablet improved my note-taking skills*	3	3	5	1	-
At this time – Because of the tablets, I paid more attention in class	1	7	2	1	-
At this time – Using a tablet computer changed the way I approach preparing writing assignments	3	6	1	1	-
At this time – The tablet PC helped me improve my performance in this course	3	4	4	-	-
At this time – Having work on the tablet displayed for the class improved my participation in class	2	6	3	-	-
At this time – Using tablets in class was a better learning experience compared to other English courses I have taken	3	8	-	-	-
At this time – Having a tablet PC in class helped me understand the course material better	3	6	2	-	-
At this time – DyKnow was an effective tool for classroom presentations and note taking	5	5	1	-	-
At this time – Having my notes available online was helpful	2	7	2	-	-
At this time – Feedback on assignments on Dyknow helped with my learning in this course	3	6	1	1	-

\* The student who disagreed described him- or herself as a beginner in using the internet and mobile devices and an intermediate in using tablet computers and word processing software to compose assignments.

## Appendix 10

As part of a milestone report prepared for this project in March 2011, faculty involved in teaching the EAC149 courses were asked the following question:

“Are there any preliminary findings, observations or lessons learned that can be shared at this time?”

They made the following observations about the impact of tablet technology and related software on their work:

1. Use of an in-class assistant (Seneca Learning Centre tutor) familiar with DyKnow has lessened technical difficulties, especially at the start of the semester and each class.
2. Use of DyKnow as a teaching tool slows down the pace of the class, such that less material can be covered in the experimental (tablet) class.
3. Interactive functionality of tablet and DyKnow is a key benefit. However, it is important to create not gimmicks but pedagogically relevant college-level activities to engage students. Otherwise, time is wasted in class entertaining rather than accomplishing learning outcomes.
4. Tablets provide an excellent platform for demonstrating exemplars – whether it is concepts related to the course or model student work. In addition, students can manipulate/interact with the material (e.g., student work) more fully and actively to render exemplars.
5. Tablets are an excellent medium for taking and storing notes. Teacher’s presentation (e.g., session notebook in DyKnow) creates an organizational framework for capturing key concepts through individual and collective contributions. Through DyKnow’s ‘share control’ feature, notes generated during group work become part of the collective class notebook.
6. Tablet provides a closer connection to the material and the teacher than conventional presentation methods. Students are interacting directly with the teacher’s material – e.g., taking notes directly onto presentation material versus watching a PP presentation of the same material. Therefore, a higher level of student engagement with material has been observed with the experimental group.
7. Tablet simulates a one-on-one tutorial experience.
8. Tablet provides excellent platform for students to engage fully in all stages of the writing process – from brainstorming to outlining, drafting and revising work – and to keep notes stored in one place. Drafts can be retrieved easily and further revised into the final product, which can be sent electronically to professor. Writing can then be marked electronically and sent back to the student with feedback, where further revising can be done (see Appendices 1 to 6 for examples of this process).
9. Limitations of DyKnow: small panel/screen size for applications in English; inability to split screen or scroll for purposes of composition and revision, in particular. These limitations are inherent to DyKnow as a presentation tool rather than a word processing tool. However, MS Word (Review) works well as a good platform for composition process as stylus can be used, especially for essay writing. Solution: students write short quizzes and paragraphs in DyKnow and switch to MS Word for essays.
10. DyKnow allows professor to mark short paragraphs and quizzes electronically and send them back to class quickly for feedback. (Students don’t have to wait for teacher to hand

back assignment in class as with control group. However, as noted above, not all students are able to download DyKnow at home.)

11. Use of DyKnow is fundamentally different for English than for Math.
12. Training on Dyknow and time to feel comfortable using the new tools as part of the teaching methodology are integral to the success of the project.
13. Notwithstanding the technical difficulties (e.g., machines powering off) and resistance to DyKnow/tablet technology experienced by the pilot group at the start of the semester, the students in both classes developed expertise in using the tablets over the course of the semester. They requested to use them for the final exam and a professor teaching some of these students this semester has reported that they have asked to use tablets in her class.





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