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## THE LAPTOP-FREE ZONE

Jana R. McCreary\*

### I. INTRODUCTION

I ban laptops—from the first few rows of my classroom only. I do this because I recognize that some students use laptops effectively and appropriately and benefit from having them in the classroom. I do this because other students cannot resist the temptation to look at another student's screen and therefore need a place to sit in the classroom free from distraction. And I do this because feedback from almost 450 law students convinced me that the benefit of having a computer in class for some students outweighs any discomfort I may have when a smile crosses a student's face particularly when I know nothing funny was just said but that the student must have just received an amusing instant message or e-mail—and especially when my approach minimizes the distraction for those students who prefer an area in the classroom free from laptops. After all, if I work to engage all of my students, fewer of them will be doing things they should not be doing.

I do not make these decisions lightly; rather, the more I investigate the debate about laptops in law school classrooms, learning styles, and students' views, the more I am assured that the laptop-free zone I set up in my classrooms is the best solution for doctrinal courses. I also now realize, however, that instructing students for a week or two in a classroom entirely devoid of laptops may also help serve the best interests of the students.

Many law school professors oppose students' use of laptops in the classroom, but others embrace the added opportunities such technology

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brings to the learning environment.<sup>1</sup> Today, a number of law schools strongly recommend that incoming students come to school with a laptop; these schools often tout their focus on preparing students for the practice of law in the digital age with its ever-increasing reliance on computers.<sup>2</sup> And some schools even *require* students to own a laptop.<sup>3</sup>

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<sup>1</sup> Compare, e.g., Nancy G. Maxwell, *From Facebook to Folsom Prison Blues: How Banning Laptops in the Classroom Made Me a Better Law School Teacher*, 14 RICH. J.L. & TECH. 4 (2007), with David I.C. Thompson, *Laptops in the Classroom: Don't Ban Them. Use Them*, [http://law.du.edu/thomson/AALS2008/AALS2008\(c\)DavidThomson.pdf](http://law.du.edu/thomson/AALS2008/AALS2008(c)DavidThomson.pdf) (last visited Feb. 26, 2008).

<sup>2</sup> See Northwestern Law, *Notebook Program*, <http://www.law.northwestern.edu/notebook/> (last visited March 6, 2009). The school requires a computer and strongly recommends a laptop:

We believe that notebook computers offer students the most flexibility because they can be used for taking notes in classes, connecting to the Law School network from connections in the Law School, Library and Residence Halls, uploading your resume and job posting through the Career Strategy Center and for writing exams in some courses.

*Id.* See also Saint Louis University School of Law, *Laptop Recommendation*, <http://law.slu.edu/technology/FAQ/laptop.html> (last visited Nov. 3, 2008). Saint Louis University School of Law recommends to its student that:

In order to be successful in law school and in your legal career, Saint Louis University School of Law strongly recommends that you have a laptop. The laptop computer has become a vital tool for law school students and practicing attorneys. Whether you envision yourself in the courtroom, the boardroom, in private practice or public service, purchasing a good quality laptop computer now will help you develop skills and habits in law school that will contribute to your success as an attorney. In addition, students with a laptop computer have the option of taking final exams on the computer as long as it meets our minimum requirements.

*Id.* Similarly, the University of North Carolina School of Law informs its students that “[w]hile not required, many students find that a laptop computer is a vital tool for succeeding in law school. One of the most important reasons students choose to own a laptop is to be able to take exams electronically.” University of North Carolina School of Law, *Student Technologies*, <http://www.law.unc.edu/pastudents/studying/technology.aspx> (last visited Nov. 3, 2008). Further, “Pepperdine University School of Law recommends but does not require that law students purchase notebook computers to assist them in their studies and exam-taking while in law school. Over 90% of currently enrolled law students own laptop computers.” Pepperdine University School of Law, *Should You Get a Laptop?*, <http://law.pepperdine.edu/webdev/oto/4.php> (last visited Nov 3, 2008) (emphasis omitted). For a list of schools recommending or requiring laptops in law school, see Kevin Yamamoto, *Banning Laptops in the Classroom: Is it Worth the Hassles?*, 57 J. LEG. EDUC. 477 (2007).

<sup>3</sup> See, e.g., University of Chicago Memo, *Laptop Recommendations*, <https://www.law.uchicago.edu/files/studentcomputingmemo.pdf> (July 14, 2008) (“As you know, you will be required to have a laptop when you attend school this Autumn.”); Wake Forest University School of Law, *Laptop Information*, <http://law.wfu.edu/welcome/laptop> (last visited Oct. 17, 2008) (requiring students to own a laptop); University of New Mexico School of Law, *UNM School Admissions Laptop Specifications*, <http://lawschool.unm.edu/>

But often, when students arrive on campus, they find that individual professors might have other rules—including no laptops allowed in the classroom.

In the past few years, a lot of talk has been generated about the connection between students' learning and their use of laptops in the classroom; I refer to that talk as "The Laptop Debate." The competing views of the debate include concepts such as the following: ban laptops; avoid paternalism; protect students from their own poor judgment; and adapt and embrace technology.

The question, though, should not be what *professors* prefer. The question should be whether banning laptops from the law school classroom is the best thing we can do for our students—having considered all of their concerns. Secondarily, we must determine how to create the best learning environment for our students, considering the potential abuses of laptops. This Article will examine professors' arguments related to banning laptops, phrased in terms of doing what is best for the students. But it will also look at the views of students and how they learn. These issues came into focus for me after my own experience with banning laptops.

In December 2006, a flurry of e-mails on a law professor listserv addressed the topic: whether we should allow our students to use laptops in the classroom.<sup>4</sup> Bolstered by others who also thought professors should not allow laptops, I banned them from both of my courses for the spring semester. Convinced that this was the correct thing to do, I knew that the students would very likely disagree. And the more I thought about it, the more I realized their views mattered. After all, plenty of professors have expressed their opinions on laptops in the classroom.<sup>5</sup> However, what about the students' opinions?<sup>6</sup>

Therefore, I began informally gathering students' views on laptops in the classroom in the spring of 2006. Based on that feedback, in the fall of 2007 I formally surveyed 449 students. I developed an Institutional Review Board-approved anonymous survey and collected data on laptop usage and related distractions from second-year law students at

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admissions/laptop-program.php (last visited Oct. 17, 2008) ("UNM Law School requires that all entering students own a laptop computer.").

<sup>4</sup> Representative e-mails on file with author.

<sup>5</sup> The December 2006 e-mail thread resulted in thirty-four e-mails in fewer than four days. See *supra* note 4.

<sup>6</sup> My thinking was in line with that of Professor James Levy, that is, ask the students what they think about laptops. See James B. Levy, *As A Last Resort, Ask The Students: What They Say Makes Someone An Effective Law Teacher*, 58 MAINE L. REV. 49 (2006). Professor Levy has written an enlightening article addressing what makes a good professor, which asks his audience—his students—for their opinions. *Id.*

three separate law schools: Cecil C. Humphreys School of Law at the University of Memphis, Nova Southeastern Sheppard Broad Law Center, and Seattle University School of Law. This Article reports those results and my subsequent conclusions.

Based on my analysis of these surveys, I realized that banning laptops could benefit some students. Yes, as professors suspected, some students inappropriately use the Internet during class. However, for many other students, banning laptops would hinder their organizational skills, impede their time-management, and possibly force them to adopt a new system of learning during the time when they are arguably facing the most difficult curriculum of study in their lives. Accordingly, I banned laptops—from only the first few rows of my classroom.

My classroom decision was not based on the survey results alone. In light of the survey results and (1) to balance the students' reports with my educational goals as a professor (factoring in the arguments of other professors who have contributed to the laptop debate); and (2) to utilize the survey results in the context of designing my own educational environment, I needed to understand more about how students learn.<sup>7</sup>

This Article addresses the underlying issues of the laptop debate and how students learn. Part II provides context for the debate by outlining the arguments on each side. Part III explores the adult learning process and examines the global versus the analytic learning style. Part IV turns to the students' views, based on a survey conducted of 449 law students. Part IV first explains the methodology of the survey and then discusses

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<sup>7</sup> Educating is distinct from learning. Education emphasizes the professor; it is what we do. Learning, on the other hand, emphasizes the person who is being changed or who is acquiring new skills or knowledge or attitudes. This is what our students do. See MALCOLM S. KNOWLES, ELWOOD F. HOLTON, III & RICHARD A. SWANSON, *THE ADULT LEARNER: THE DEFINITIVE CLASSIC IN ADULT EDUCATION AND HUMAN RESOURCE DEVELOPMENT* 11 (5th ed. 1998). Granted, of course, the best educator is constantly learning, and a great student knows also how to educate the professor and fellow students during the process. In learning law, by discussing the material rather than lecturing about it, we can achieve two complimentary goals: educating and learning. Another way we can learn is by relishing our students' varied backgrounds—especially when we are fortunate enough to have students who have not gone directly from high school to college to law school but who have, instead, spent some time in the workforce. Although this is typically the situation in a law program with a part-time evening division, it also arises in a traditional day program. This year alone, I have a student who worked in human resources for over ten years and three students who worked as engineers. These experiences can greatly add to class discussions about a variety of contract issues. However, if a teacher thinks she has nothing to learn from her students, the teacher not only robs herself of this enriching approach to teaching, she robs the other students from learning from their classmates. See, e.g., *id.* at 43 (citing Ruth Merton, 11 J. ADULT EDUC. 178 (1939)).

the results, detailing my conclusions and the changes the survey led me to make—and to plan to make—in my own classroom.

## II. THE LAPTOP DEBATE

The debate over laptops in the classroom is not new. The issue has been discussed in national newspapers,<sup>8</sup> on national radio,<sup>9</sup> in countless e-mails,<sup>10</sup> on blogs,<sup>11</sup> and in legal journals.<sup>12</sup> As more students bring laptops to law school, more law professors are asking themselves, “At what cost?” The only issue that seems to garner agreement among the groups is the distractions that laptops can cause to other people—for example, the noise of typing and blinking monitors.<sup>13</sup> At the center of the debate are two other core issues: attention in class and note-taking consequences.

Information about these issues comes primarily in the form of opinions and anecdotal evidence.<sup>14</sup> Whether or not one favors laptops in

<sup>8</sup> *Law Professor Bans Laptops in Class, Over Student Protest*, USA TODAY (Mar. 21, 2006), available at [http://www.usatoday.com/tech/news/2006-03-21-professor-laptop-ban\\_x.htm](http://www.usatoday.com/tech/news/2006-03-21-professor-laptop-ban_x.htm) [hereinafter USA TODAY].

<sup>9</sup> Interview by Michele Norris with Professor Daniel Coyne on *All Things Considered*, NPR (Oct. 9, 2007), available at <http://www.npr.org/templates/story/story.php?storyId=15127343>. Professor Coyne considered laptops to be a distraction to students. *Id.*

<sup>10</sup> On file with author.

<sup>11</sup> See, e.g., Posting of Andy Guess, to Tomorrow’s Professors Blog, [http://amps-tools.mit.edu/tomprofblog/archives/2008/05/875\\_hey\\_you\\_pay.html](http://amps-tools.mit.edu/tomprofblog/archives/2008/05/875_hey_you_pay.html) (May 27, 2008); Tracy McGaugh, *TMI (Too Much Information) in Law School?*, MILLENNIAL LAW PROF (May 17, 2008), available at <http://www.themillennials.org/2008/05/tmi-too-much-information-in-law-school.html>; Calvin Massey, *Surfing the Net in Class*, THE FACULTY LOUNGE (May 17, 2008), <http://www.thefacultyounge.org/2008/05/surfing-the-net.html>; Posting of Orly Lobel, to PrawfsBlawg, [http://prawfsblawg.blogs.com/prawfsblawg/2006/07/banning\\_laptops.html](http://prawfsblawg.blogs.com/prawfsblawg/2006/07/banning_laptops.html) (July 27, 2006, 14:34 EST).

<sup>12</sup> See Maxwell, *supra* note 1; Yamamoto, *supra* note 2.

<sup>13</sup> OrinKerr.com, <http://www.orinkerr.com/2006/03/23/more-on-laptops-in-class/> (March 23, 2006, 17:28 EST) (“Laptops and their accompanying noise also create a distraction that is unfair to other students and prevents them from engaging in the sort of reflection that each should be doing.” (quoting, with permission, the e-mail from Professor Entman to her students)).

<sup>14</sup> Very few studies have been conducted in the area. See Anne L. Fay, *Impact of Laptop Computers on Students’ Academic Lives*, at 2 (2006), available at <http://www.cmu.edu/teaching/resources/PublicationsArchives/StudiesWhitepapers/LaptopStudyReport-2006.pdf>. Dr. Fay cites studies in her draft article that are similar to the ones used by Professor Yamamoto. See *infra* notes 50–62 and accompanying text. These studies address immediate recall of information from a class, which is quite different from the law-school classroom environment. Reports of increased off-task behavior with a laptop are indisputable, and the survey results discussed *infra* indicate off-task behaviors do occur. However, in 2006, researchers at Carnegie Mellon University conducted a study about the value of using a laptop for college students. See Brock Read, *Laptops Change How Students Work But Do Not Improve Their Performance, Study Finds*, CHRON. OF HIGHER EDUC., Nov. 29,

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the classroom seems to predict one's views on the two core issues, students' attention and note taking. Attempting to be open-minded about the arguments in favor of banning laptops, I have reviewed the various opinions, yet I remain unconvinced that banning laptops is in the best interest of *all* students. In countering those opinions below, I also offer my own.

A. *Vying for Attention*

Many professors who have banned or have considered banning laptops in their law school classrooms complain of the connection between students and professors—the lack of attention paid in class. Professors complain that students pay more attention to their computers than to the professors.<sup>15</sup> Others, though, say that if a professor is engaging and interesting, this problem can be avoided. Regardless, the main problem seems to be the Internet and not laptops themselves.<sup>16</sup> In spite of this, some professors continue to mask their ban in a complaint of “picket fence[s]”<sup>17</sup> and requests of professors to “repeat the question.”<sup>18</sup>

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2006, <http://chronicle.com/daily/2006/11/2006112901t.htm>; see also Fay, *supra* note 14. The study concluded that although students spent more time on tasks when using a laptop outside of the classroom for school work, much of the time was not task-productive because the students were doing things such as checking e-mail, reading news, etc. Fay, *supra* note 14, at 21. But global learners often work best when they can interrupt their own work, whether that interruption is checking e-mail, taking a short walk, tuning in to a short television break, etc. See *infra* notes 110–35 and accompanying text.

<sup>15</sup> This is not to discount any argument that a professor truly feels she is able to teach better without laptops in the classroom. See, e.g., Maxwell, *supra* note 1. However, as previously discussed, educators should carefully consider whether they can adapt to the new technology in light of the fact that more effective teaching may come at the expense of some students giving up an integral educational tool.

<sup>16</sup> *Id.* at 43.

<sup>17</sup> USA TODAY, *supra* note 8.

<sup>18</sup> David Cole, *Laptops vs. Learning*, THE WASH. POST, Apr. 7, 2007, available at <http://www.washingtonpost.com/wp-dyn/content/article/2007/04/06/AR2007040601544.html>. One of the comments posted to Professor Cole's article, stated as having been written by one of his students, contests the success of the ban. Posting of nrokoosob to <http://www.washingtonpost.com/ac2/wp-dyn/comments/display?contentID=AR2007040601544&start=21> (Apr. 7, 2007, 13:57:09). The commenter notes that students, in evaluating the success of the ban, knew that if they did not support the ban, their exam would be more case-fact intensive. *Id.* The student argues this had a great impact on students' evaluations of the ban. See *id.*; see also Sherry F. Colb, *Should Law Students' Use of Laptops Be Limited to Prevent Web-Surfing in Class?*, <http://technology.findlaw.com/articles/00006/010231.html>. Professor Colb permitted a reporter to sit in on her class because the reporter was writing a story about web usage in higher education. See Colb, *supra*. Shockingly, Professor Colb admitted that “[i]t had not occurred to [her] that people were cruising the Internet during class . . .” *Id.* The reporter said that about forty percent of Professor Colb's students had been on the Internet during her class. *Id.*

## 1. It Is About the View

University of Memphis Professor June Entman banned laptops from her law school classrooms in the spring of 2006. Regarding her decision to ban, she said, “The computers interfere with making eye contact. You've got this picket fence between you and the students.”<sup>19</sup> In addressing the impact of laptops on class discussions, she told her students that the laptops created a “wall of vertical screens” that hampered her ability to see their faces.<sup>20</sup>

Similarly, Washburn University School of Law Professor Nancy Maxwell noted the “barrier” that laptops create as one reason she banned laptops from her law school classrooms. As Professor Maxwell explained, “It became obvious to me, when students have their own artificial obstructions in front of them, the laptop, this prevents me from interacting with them.”<sup>21</sup> She described her experience of teaching while allowing laptops as “bouncing off a blank wall,” and she associated the presence of laptops in the classroom with a drop in “human interactions” – as tied to a drop in body language and facial expression cues.<sup>22</sup>

My personal experience has been that very few students are truly hidden behind their computers. The few times they have been, I have not hesitated to let students know that my vision was hindered, explaining that the lack of visibility makes it difficult for a professor to gauge the level of the students’ understanding. I now regularly explain to my students at the start of the semester that I gauge their level of understanding by looking at their faces, and it is obvious when they are tuned out of the class and tuned in to something on their laptop.<sup>23</sup>

Put simply, to ban laptops because some students hide behind them seems to mischaracterize the issue. If a student propped open a notebook on his desk and hid behind it, surely the professor would not ban notebooks from the classroom. If a student repeatedly laid her head on the desk, blocking any eye contact with the professor, one would hardly expect desks to be banned. Instead, in these situations, the

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<sup>19</sup> USA TODAY, *supra* note 8.

<sup>20</sup> OrinKerr.com, *supra* note 13.

<sup>21</sup> See Maxwell, *supra* note 1, at 42.

<sup>22</sup> *Id.*

<sup>23</sup> Of course, this addresses an issue of only communication between a professor and students. If the issue truly was having people engaged in a dialogue with each other and having them see each other, one might wonder why we do not have better shaped classrooms such that students could more easily see each other rather than have a discussion with the back of their classmates’ heads. Perhaps this is because the focus is mostly on the professor having the attention of the students, not having students engaging in dialogue with each other.

behavior would be addressed. Regarding the very few students who are hidden behind laptops, I suggest we do the same.

## 2. Professor vs. the World Wide Web

The core reason most professors cite for banning laptops is that students' attention is diverted to the Internet. University of Michigan Law School Professor Don Herzog has even said that, although he will compete with computer games, he will not compete "with the entire Internet."<sup>24</sup> And Harvard University Professor Bruce Hay noted that, when many people check e-mail or access the Internet in a classroom, "it becomes demoralizing and distracting."<sup>25</sup>

Memphis's Professor Entman also discussed the use of the Internet,<sup>26</sup> saying its use was annoying, distracting, dishonest, and inconsiderate.<sup>27</sup> Her stated reason for banning laptops involved students' lack of attention to classroom material; however, she also stated that before she made the decision to ban laptops, she requested, without success, to have Internet access disabled.<sup>28</sup> One can hardly help but wonder why Professor Entman would attempt to have the Internet disabled if that was not the impetus behind her decision to ban laptops.

Georgetown Law Professor David Cole cited dual reasons for banning laptops from his classrooms: note-taking issues<sup>29</sup> and students' temptation to "surf"<sup>30</sup> the Web during class.<sup>31</sup> He explained that when students web-surf, they are "doing something besides being involved in class . . . mak[ing] for a much less engaged classroom . . ." Professor Cole argued that this affected all students—and him.<sup>32</sup> In distinguishing

<sup>24</sup> Jodi S. Cohen, *Professors Compete with, Ban In-class Web Surfing*, CHI. TRIB., Aug. 16, 2006, available at [http://media.www.arbiteronline.com/media/storage/paper890/news/2006/08/16/Biztech/Professors.Compete.With.Ban.InClass.Web.Surfing-2220792.shtml?no\\_rewrite200612041207&sourcedomain=www.arbiteronline.com](http://media.www.arbiteronline.com/media/storage/paper890/news/2006/08/16/Biztech/Professors.Compete.With.Ban.InClass.Web.Surfing-2220792.shtml?no_rewrite200612041207&sourcedomain=www.arbiteronline.com).

<sup>25</sup> See Posting of Orly Lobel, *supra* note 11 (quoting Professor Bruce Hay as reported in the *Chicago Tribune* in *E-Slacking: It's Laptop over Lecture*, CHI. TRIB., July 18, 2006, at 1, and *Students with Laptops Plug In, Tune Out*, CHI. TRIB., July 18, 2006, at 9).

<sup>26</sup> According to one source, Wi-Fi had been installed during the semester before Professor Entman's ban while she was on sabbatical. Yamamoto, *supra* note 2, at 8 n.33. (The website cited in Professor Yamamoto's article is currently unavailable.)

<sup>27</sup> OrinKerr.com, *supra* note 13 (quoting, with permission, the e-mail from Professor Entman to her students).

<sup>28</sup> *Id.*

<sup>29</sup> See *infra* note 51 and accompanying text.

<sup>30</sup> See generally MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY 1257 (11th ed. 2005) (defining "surf[ing]" as the activity of scanning a wide variety of web pages on the Internet).

<sup>31</sup> Cole, *supra* note 18.

<sup>32</sup> *Id.*

previous generations' attention to crossword puzzles or even daydreaming, Professor Cole stated that Internet access actually invites students "to check out whenever they find their attention wandering" because of the enormous volume of information available at their fingertips.<sup>33</sup>

Some law schools are trying (or have tried) to address Internet use during class by focusing on Internet access. Recently, the University of Chicago Law School disabled its Wi-Fi access in law school classrooms.<sup>34</sup> Dean Saul Levmore explained, "Our goal is to provide the best legal educational experience in the country, with students and faculty focused on the exchange of ideas in a thorough, engaging manner. . . . Our overarching goal is to have a terrific and interesting classroom experience—that is too important to allow diversions."<sup>35</sup> The law school recognized that students use laptops in class for notes; accordingly, the Dean was against banning laptops completely.<sup>36</sup>

It appears, though, that the University of Chicago Law School has not taken into account the reality that it is impossible to prevent Internet access by students. For example, the University of Michigan Law School implemented a block of the Internet in its classrooms in 2006.<sup>37</sup> However, the block appears to no longer be in effect.<sup>38</sup> Perhaps the school realized that blocking wireless access would not prevent students from gaining access to the Internet through other means. When access was disabled for students who were in class, students reportedly borrowed usernames and passwords from classmates not in class at the same time.<sup>39</sup> Other schools have realized that even without Wi-Fi access, students merely need a personal wireless card or cellular phone to gain access.<sup>40</sup>

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<sup>33</sup> *Id.*

<sup>34</sup> *University of Chicago Law School Eliminates Internet Access in Some Classrooms*, THE UNIV. OF CHI. NEWS, Apr. 11, 2008, available at [http://news.uchicago.edu/news.php?asset\\_id=1329](http://news.uchicago.edu/news.php?asset_id=1329).

<sup>35</sup> *Id.* (internal quotation marks omitted).

<sup>36</sup> *Id.*

<sup>37</sup> See Posting of Orly Lobel, *supra* note 11.

<sup>38</sup> University of Michigan Law School, Home: Wireless Network Access, <http://www.law.umich.edu/currentstudents/informationtechnology/wireless/Pages/default.aspx> (last visited May 20, 2008) ("The Law School no longer controls wireless access during class time.").

<sup>39</sup> See Posting of Orly Lobel, *supra* note 11.

<sup>40</sup> See Maia Ridberg, *Professors Want Their Classes "Unwired,"* USA TODAY, May 3, 2006, available at [http://www.usatoday.com/tech/news/2006-05-03-unwired-grad-school\\_x.htm](http://www.usatoday.com/tech/news/2006-05-03-unwired-grad-school_x.htm) (discussing UCLA Anderson School of Management's decision to "unblock" the Internet after realizing that students could access the Internet in spite of the attempts of the school to block the school's Wi-Fi). See also Mahesh P. Bhave, *Classroom with Wi-Fi: A Challenge for Teacher Control and a Revolution in Learning*, T.H.E. J., Nov. 2002, at 22.

Many professors who ban laptops report that their classroom discussions have become livelier and more engaged. But all classrooms where laptops and the Internet exist are not devoid of discussion. This past year, I had many students participate in lively discussions, and most of those students had a laptop in front of them. I also had many students who regularly wrote out their class notes never volunteer a word. It appears, then, that the differences are in teaching styles and in individual students, not a difference that a laptop makes.

A professor's teaching style also affects how many students in a class are engaged—no matter what method of note taking is employed. Some professors (and students<sup>41</sup>) believe that if a professor is engaging and interesting, students are less likely to use laptops for nonclass-related purposes. Chicago Law School Professor Randy Picker stated that even though “[o]bviously the Web is something of a distraction . . . there are a lot of distractions, . . . [and m]y job is to make them want to pay more attention to me than what is on the screen.”<sup>42</sup>

On the other hand, South Texas College of Law Professor Andrew Soloman, acknowledging that “better and more engaging teaching is the most important first step and such teaching will lessen the number of students who are tempted to engage in inappropriate behavior” also noted that as professors, we will not engage “every student, for every minute, in every class.”<sup>43</sup> He further argued, “[N]ot every client is going to be thoroughly engaging, not every witness is going to be thoroughly engaging, not every supervisor is going to be thoroughly engaging, not every judge is going to be thoroughly engaging . . . .” Professor Soloman seemed to suggest that the responsibility was two-fold: professors refusing to tolerate “counterproductive, rude, disrespectful, and distracting” behavior, and students understanding the professor's expectations, no matter their level of engagement.<sup>44</sup>

Some professors in favor of laptops in the classroom choose to harness the power of the Internet, finding ways to incorporate it into the law school classroom. For example, one professor faced a student who

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<sup>41</sup> See *infra* notes 161–65 and accompanying text. See also Marc Prensky, *Engage Me or Enrage Me*, EDUCAUSE R., Sept.–Oct. 2005, at 60–65.

<sup>42</sup> Cohen, *supra* note 24 (internal quotation marks omitted).

<sup>43</sup> E-mail from Andrew Soloman to LWI Listserv (Dec. 4, 2006) (on file with author).

<sup>44</sup> *Id.* Other professors agreed. University of Denver Sturm College of Law Professor, David Thomson, also puts responsibility on professors to tell students what behavior is unacceptable. See Thompson, *supra* note 1, at 3. He goes on to state that professors have a role in helping students learn how to use technology appropriately. *Id.* at 15. And Camden Rutgers's Professor, Ruth Anne Robbins, opined that it is part of her job to “talk to students about their professional responsibility” regarding appropriate use of laptops in others' presence. E-mail from Ruth Anne Robbins to the LWI Listserv (Dec. 2, 2006) (on file with author).

had accessed an unedited version of a case on the Internet during class, and the professor was able to use that situation to explain further intricacies of case interpretation; the student was able to see not only deeper analysis, but also the issues of reading edited version of opinions.<sup>45</sup> Personally, I have had my Contracts, Torts, and Remedies students work on problems in small groups and post their answers on TWEN,<sup>46</sup> enabling me to view the posts and select those concepts requiring further development or clarification in class. Several students seemed more willing to post answers than raise their hands, thus enabling me to engage otherwise shy students. In other situations, students with laptops have been able to add to the class discussion by instantly finding information about a current legal issue or the definition of a legal term. This enhances class discussion and engages students on a new level.

Other professors see the use of laptops and the Internet in class as a means of better preparing students for the practice of law. As University of Denver Sturm College of Law Professor David Thomson has noted, our teaching is about preparing students for their futures—not our pasts.<sup>47</sup> In preparing them for that future, we should be aware of changes occurring in practice. Touro College Jacob D. Fuchsberg Law Center Professor Tracy McGaugh, author of the *Millennial Law Prof Blog*, in responding to a question of “what competent lawyer will surf the web in court?” argues that in the future lawyers will indeed do so—especially the good ones.<sup>48</sup> Professor McGaugh recognizes that lawyers must attend to multiple tasks, and she attributes learning that skill to multitasking in law school, something that has gone on for generations.<sup>49</sup>

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<sup>45</sup> E-mail from William Dunlap to LWI Listserv (Dec. 4, 2006) (on file with author) (stating: “I was rather impressed that someone would go to the trouble of trying to figure out why he was unpersuaded by the casebook’s comments and to respond to them from original sources. This could change the nature of class discussions.”). See generally Daniel J. Solove, *Teaching Edited vs. Unedited Judicial Opinions*, CONCURRING OPINIONS, May 19, 2008, [http://www.concurringopinions.com/archives/2008/05/teaching\\_edited.html#comments](http://www.concurringopinions.com/archives/2008/05/teaching_edited.html#comments).

<sup>46</sup> “TWEN” is the West Education Network, an online system supported by Westlaw.

<sup>47</sup> See Thompson, *supra* note 1, at 4 (“I want to prepare you for your future . . . not my past.”) (omission in original).

<sup>48</sup> Tracy McGaugh, *Millennial Law Prof: “What Lawyer Surfs the Web in Court?”*, Feb. 22, 2008, <http://www.themillennials.org/2008/02/what-lawyer-surfs-web-in-court.html>.

<sup>49</sup> *Id.* Professor McGaugh states that:

When I was in law school, . . . we were told that lawyers had to have their attention everywhere at once: the witness in the box, the jury, the judge, opposing counsel, the door into the courtroom. For generations of lawyers, attending to multiple tasks at once (see where this is going?) was a new skill they learned in law school and honed in practice. Now, multi-tasking is something that students come to law

B. *My Way Is Better Than Your Way*

Secondary to the complaint that laptops are a distraction for students, the strongest argument against laptops in the classroom is that they are detrimental to note taking. Professors who espouse this argument and accordingly ban laptops from their classrooms typically opine that taking notes on a laptop encourages a sort of “transcription” of notes, preventing students from being involved in the classroom discussion because they are trying too hard to write down everything that is said.

Professors phrase their justifications for banning laptops slightly differently but all have the same general line of thought, and none have supporting authority for their assumptions. Memphis Professor Entman argues that when using laptops, students focus too much on typing everything said and do not spend enough time thinking or analyzing.<sup>50</sup> Professor Cole of Georgetown University School of Law argues that a student who takes verbatim notes “no longer processes information in a way that is conducive to the give and take of classroom discussion. Because taking notes the old-fashioned way, by hand, is so much slower, one actually has to listen, think[,] and prioritize the most important themes.”<sup>51</sup>

Most professors claiming laptops have a detrimental effect on note taking do so without any supporting authority for their assumptions. One professor, however, has attempted to link his argument to some research and studies. Initially, this seemed to be the break-through needed to support the arguments of the pro-ban professors. But this professor’s argument falls short.

In deciding to ban laptops from his Federal Income Tax class in 2006, South Texas College of Law Professor Kevin Yamamoto states he relied on scientific studies in deciding that “laptops encourage poor note-

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school already knowing how to do. Certainly, very few of them know how to do it with the focus and precision required of [a] lawyer. But the multi-tasking that Millennials have grown up with is not so different in kind from the multi-tasking that's part of our craft. Opening the trial notebook to exactly the right place in the deposition, flipping through the well-worn and dog-eared (or Post-It flagged!) rules of evidence, and maintaining a rhythm to cross-examination are all multi-tasking skills. Access to a laptop and an Internet connection makes most of these tasks easier, not harder.

So what lawyer will surf the web in court? My guess is that, in the future, all of the good ones will.

*Id.*

<sup>50</sup> USA TODAY, *supra* note 8.

<sup>51</sup> Cole, *supra* note 18.

taking skills.”<sup>52</sup> He argues that scientific studies “indicate this is a problem because students who are transcribing are not thinking deeply into the material but are in a mad dash to write down every word.”<sup>53</sup> However, when discussing the studies, he admits that no study “directly on point” has been undertaken and instead relies on studies of note taking during science lectures; those studies indicate that the more thorough the notes, the greater the quality of postlecture learning.<sup>54</sup> Professor Yamamoto then argues, without any scientific support, that the type of learning in law school is so different than that of a “factual nature” that the outcome must be different in a law class, and less thorough notes are desired for optimal learning. But to support this, he relies only on studies in which notes are provided *to* students, resulting in the students not being successful in “higher order learning.”<sup>55</sup>

Because the material being learned in a law school class is conceptual in nature, Professor Yamamoto next argues that verbatim note taking will not help in comprehending this material.<sup>56</sup> However, in doing so, Professor Yamamoto admits that he could find no studies that supported his opinion that students do not think while taking verbatim notes.<sup>57</sup> Instead, he relies on nothing more than anecdotal stories of other law professors.<sup>58</sup>

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<sup>52</sup> Yamamoto, *supra* note 2, at 490.

<sup>53</sup> *Id.* at 490–91.

<sup>54</sup> *Id.* at 501.

<sup>55</sup> *Id.* at 27. Some professors who ban laptops have allowed two or three students to continue to take notes on a laptop and then provide those notes to the entire class. *See, e.g.,* Cole, *supra* note 18. Others provide notes before and after class to students and notify students in advance when they will be called on. *See* Maxwell, *supra* note 1. I cannot help but wonder how anyone who argues that note taking on a laptop is detrimental to a student could allow *any* student to harm himself—unless, of course, the issue really is not about note taking at all but more about fear of competing with the Internet. Furthermore, the studies Professor Yamamoto used actually show a detrimental effect of providing notes transcribed by other students or even the professor’s own notes to students because a student recording her own notes can benefit more from the learning process. Yamamoto, *supra* note 2, at 503.

<sup>56</sup> Yamamoto, *supra* note 2, at 502–03.

<sup>57</sup> *Id.* at 503.

<sup>58</sup> *Id.* at 502–04. It seems as if Professor Yamamoto’s premise is this:

I, unlike those before me, argue that science supports my theory that laptops are detrimental to note taking by law students. Scientific studies have been conducted on related areas, but none of those areas actually support my argument. In fact, some are actually counter to my argument. Therefore, I actually do not rely on scientific studies, but I can rely on other support, such as other professors before me who merely opined law students take better notes without a laptop.

(*Note that this is not what he has said, only what I have interpreted based on the missing link in his argument.*) It seems, then, his argument does very little to advance his theory that laptops are a detriment to students’ note taking. *See id.*

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Professor Yamamoto also points to studies that address encoding and external storage of information.<sup>59</sup> These studies looked at students who took notes and then either did or did not have an opportunity to review those notes before being tested on the material.<sup>60</sup> However, Professor Yamamoto never shows how these studies are linked to the law school experience. Students in law school rarely are tested on material shortly after discussing it in class. Instead, students are encouraged to take their class notes and, along with information from their casebook, hornbooks, and other study aids, compile an outline.<sup>61</sup> The outline is used to organize all of the information into a “streamlined, usable form” for studying.<sup>62</sup> The process of synthesizing class notes and other material into one outline is the process by which students “find the essence of a subject,” “clarify organizational problems,” and understand how the many topics covered in a course relate.<sup>63</sup>

Furthermore, in my experience, both as a professor listening to students’ questions during review time and as a student discussing issues with my classmates, many students rely on reviewing the hypothetical situations discussed in class in order to help them understand the “big picture” of a course. When studying, students might review their class notes and recall why and how, when facts were changed in a situation posited to the students, the result changed. By typing their notes, they are able to access more of this information.

Some students who use laptops report that they use them to organize as they type. They “think” this way, and some use the process of editing the typed notes as their system of outlining.<sup>64</sup> These students

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<sup>59</sup> *Id.* at 502.

<sup>60</sup> *Id.* These studies show also that top undergraduate students are better at recording key ideas of a lecture. *Id.* However, Professor Yamamoto does not address the link that most law students were top students in their undergraduate studies.

<sup>61</sup> See, e.g., JEFF DEAVER, THE COMPLETE LAW SCHOOL COMPANION: HOW TO EXCEL AT AMERICA’S MOST DEMANDING POST-GRADUATE CURRICULUM 95 (2d ed. 1992).

<sup>62</sup> *Id.*

<sup>63</sup> *Id.* at 96.

<sup>64</sup> See Posting by BC to Concurring Opinions, [http://www.concurringopinions.com/archives/2005/12/my\\_problem\\_with.html](http://www.concurringopinions.com/archives/2005/12/my_problem_with.html) (Dec. 5, 2005 02:39 EST) [hereinafter B.C.]. With the increase of blogs and online articles, we have seen an increase of comments on written pieces. I recognize the anonymous nature of these comments can lead them to be suspect and untraceable; on the other hand, the students who are disagreeing with the professors who support a ban almost certainly fear displeasing a professor or two with their candor. Another alleged student commented:

I have no doubt that many first year law students don't know how to take notes properly. But you know, many of us do. And some of us are much more efficient at typing than writing. My penmanship is not the best and if I have to slow down to make it legible, sometimes I can't record a thought fast enough and I lose it.

have learned how to manage their time by using their laptops and word processing programs as tools. For these students, those who are effectively using technology to improve their performance, banning laptops would do nothing but punish them and strip them of a useful educational tool.

Additionally, students who are able to write fast may very well continue to take nearly verbatim notes.<sup>65</sup> Should professors, then, ban pen and paper from classrooms? Should professors inspect students' notes to see if anyone used short-hand to take nearly verbatim notes?<sup>66</sup>

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Your policy wouldn't be doing me any favors at all—it would be limiting to me—and I'm a \*returning\* student. I don't take notes linearly, I outline. I'm often reorganizing my thoughts in ways that frankly, may only make sense to me. You're essentially forcing \*your\* method on all of your students. I can only imagine how painful that would be for students who have never known a time when a computer wasn't part of their lives.

It's certainly your prerogative to run your class the way you see fit. But for that one student you "reach" with your policy, I'd be willing to bet there is at least one, if not more, you are holding back.

Posting by Dave!, to Concurring Opinions, [http://www.concurringopinions.com/archives/2005/12/my\\_problem\\_with.html](http://www.concurringopinions.com/archives/2005/12/my_problem_with.html) (Dec. 5, 2005 23:41 EST).

<sup>65</sup> Personally, I have almost always taken extremely detailed notes by hand. As a law student, I still participated in class and the discussion, and I was a very successful student. I also know students who hardly took any notes and were successful as well. When students ask my advice now, such as whether to study in a group or individually, use a hornbook or only the casebook, outline in detail or succinctly, or read the assignment for the week during the weekend or not until the night before class, I tell them what worked for me, give a few accounts of what worked for others, and then share advice I have read from the "books." But I then tell them that in the end, they will have to find what works best for them personally. It astounds me every time I read an account of "you must take notes this way" because this narrow thinking verges on amazing intellectual bigotry of professors over students with different learning styles.

<sup>66</sup> Another issue that arises when laptops are removed from classrooms is the "outing" of students who rely on typing to overcome a disability. A commenter on one blog entry whose author had just banned laptops wrote the following:

I'm mildly dyslexic. . . . My hand-writing is nearly impossible to read unless I stop and completely concentrate on what I'm writing. Con law should be a course on law, not hand-writing. The only way I'd be able to read the class' [sic] high points would be if I paid so much attention to writing that I didn't pay attention to [the professor]. (Some Catch-22!) Not a good result. (You might say: "Mike, get accommodations." Well, no thanks. I'm not embarrassed about being dyslexic, but I'm also a private person who wouldn't want people asking me why I was able to use a laptop. Your policy literally requires learning-disabled students to "out" themselves.)

Posting by Mike to Concurring Opinions, [http://www.concurringopinions.com/archives/2005/12/my\\_problem\\_with.html](http://www.concurringopinions.com/archives/2005/12/my_problem_with.html) (Dec. 5, 2005 12:30 EST).

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Or should we simply accept that forcing a student to hand-write notes might mean we have students who give up taking notes altogether?<sup>67</sup>

Finally, Professor Yamamoto also suggests that notes that are taken in such a thorough manner as to rival transcription do not provide students with the most productive method to understand what is going on in class.<sup>68</sup> He opines that the only thing needed during note taking is to write down the major themes or questions— “grasping the analysis” and writing down answers to problems for his Code-based tax course. He asserts that after class, students should look at their notes and fill in any gaps “as soon as possible,” apparently from memory and ideally with other students.<sup>69</sup>

My own experience, however, as a student and a professor, has confirmed that all students are not the same. Too many professors seem to think they know what type of note taking is best for all students because a particular method worked well for them. Additionally, these same professors seem to ignore the increasing differences in our students with each passing year, most notably with regard to their exposure to the use of laptops throughout their educational experience.

Indeed, I agree that the educational rigor in law school is higher than most law students have previously faced. In law school, the learning has moved away from mere memorization to a “most complex level of learning, analysis.”<sup>70</sup> Whether students understand and at what level they understand (over the long term, not merely within that one class meeting) demonstrates whether students have achieved a complex level of learning.<sup>71</sup> If using laptops to take notes was greatly hindering students’ learning and analysis, a natural result would be that students who used laptops would have overall lower grades than those who hand wrote their notes. I have not found this to be true in my own classrooms, and I have not seen any reports making such a claim.<sup>72</sup> Furthermore, as more and more students use laptops in law school classrooms, one could

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<sup>67</sup> See B.C., *supra* note 64.

I don't think that our use of laptops for notetaking detracts from the quality of our discussion—if anything, it speaks only of the students themselves. Writing out my notes does not slow me down enough to force me to think about what is being discussed; it slows me down to the point where I simply give up taking any notes at all.

*Id.*

<sup>68</sup> Yamamoto, *supra* note 2, at 503.

<sup>69</sup> *Id.*

<sup>70</sup> See M.H. Sam Jacobson, *A Primer on Learning Styles: Reaching Every Student*, 25 SEATTLE L. REV. 139, 143 (2001).

<sup>71</sup> *Id.* at 143–44.

<sup>72</sup> This, of course, would be an interesting area to pursue, with a significantly large pool of students to study, for comparison of incoming scores and statistics.

expect an overall reduction in bar examination scores. But this is not the case either.<sup>73</sup>

Certainly, some students can successfully do as Professor Yamamoto urges and note only the major themes or questions posed in a class and succeed splendidly. Some students, however, need to be able to review detailed notes of class lectures and discussions. People, after all, have different learning styles.

### III. LAW STUDENTS AS LEARNERS

As we educate, and more importantly to this debate, as we make the decisions about *how* we educate, it is vital that we try to understand the education and learning processes. Law professors are in unique positions in that we rarely receive formal training on how to teach.<sup>74</sup> We have to learn these things using our own initiative; and hopefully, most of us take that initiative. Educating ourselves about research and studies can help guide us in dealing with unique educational issues, including educating students from different backgrounds and different experiences — our *adult* students.

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<sup>73</sup> See, e.g., National Conference of Bar Examiners: Myths and Facts, <http://www.ncbex.org/multistate-tests/mbe/mbe-faqs/myths-and-facts/> (last visited May 29, 2008) (showing that bar exam scores have not been decreasing). The National Conference of Bar Examiners states on its website:

The MBE is [not] getting easier; [and] scores [have not] ke[pt] increasing while applicants are getting less able. The MBE is a reliable measure of applicant ability. The average scaled score on the MBE has varied by less than 2 points from year to year, indicating that the ability level of the candidate pool has been fairly stable. Changes in MBE scores follow closely the variations in average scores on other measures of candidate ability, such as the LSAT. This correlation between changes in MBE and LSAT scores indicates that increases in the average score mirror increases in the general ability level of the group being tested rather than a decline in the difficulty of the test.

*Id.*

<sup>74</sup> See, e.g., Vernellia R. Randall, *Increasing Retention and Improving Performance: Practical Advice on Using Cooperative Learning in Law Schools*, 16 T.M. COOLEY L. REV. 201, 208 (1999) (discussing the tendency for professors to continue the teaching styles they themselves were taught by because they are perhaps fearful to challenge the old ways based on new understanding of teaching and learning); Kevin Smith, *How to Become a Law Professor Without Really Trying: A Critical, Heuristic, Deconstructionist and Hermeneutical Exploration of Avoiding the Drudgery Associated with Actually Working as an Attorney*, 47 U. KAN. L. REV. 139, 144 (1998) (“If you are worried about your lack of teaching experience, do not be. Just take a moment and reflect on your law school experience; it is immediately obvious that no experience with, or particular aptitude for, teaching is required.”).

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A. *Andragogy: Teaching Adults*

The first thing many law professors need to remember is that we are teaching adults, not children. While it seems obvious, how we teach does not always reflect such a basic understanding. For example, first-year law students are entering a very different environment that is a completely new educational experience for most of them.<sup>75</sup> Although the environment is different, and although the level of learning is different, many professors seem to still employ the typical *pedagogical* approach, using the assumptions employed in teaching children. In doing so, those professors maintain a system of direction and dependence, a very paternalistic approach. Typically, those professors, believing they “know best” how to direct the learning of their adult students, are more likely to be the ones who ban laptops from the classroom environment.

But our students are not children; therefore, we must consider something more than just the pedagogical models of teaching and learning. The teacher who is focused on the students as adults will “do everything possible to help the learners take increasing responsibility for their own learning.”<sup>76</sup> Although much of the existing information about learning and teaching applies to children,<sup>77</sup> since the 1970s, more research has been conducted in our unique area: teaching adults, the study of which is known as *andragogy*.<sup>78</sup>

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<sup>75</sup> See, e.g., DEEVER, *supra* note 61 (discussing preventing the “stumble syndrome[]” that leads students to delays in understanding the “ways of law school itself”).

<sup>76</sup> KNOWLES ET AL., *supra* note 7, at 70. Methods that have been used by traditional pedagogical teachers to transition to teaching adults more effectively include the following: “providing a climate in which the learners feel more respected, trusted, unthreatened, and cared about; by exposing them to the need to know before instructing them; by giving them some responsibility in choosing methods and resources; and by involving them in sharing responsibility for evaluating their learning.” *Id.*

<sup>77</sup> What is especially interesting is that the “great” teachers of ancient times all taught adults. When we consider, then, the use of the Socratic method in teaching law, we can see that it developed as a method used to teach adults and learning was a process of “mental inquiry,” not just passive listening. See *id.* at 35. But see Jeffrey D. Jackson, *Socrates and Langdell in Legal Writing: Is the Socratic Method A Proper Tool for Legal Writing Courses?*, 43 CAL. W. L. REV. 267, 271–72 (2007) (discussing authorities that distinguish the law school Socratic method from that used by Socrates). Another teaching method used in law is the case method, attributed by some to the ancient Chinese and Hebrews. *Id.* Of course in the legal arena, Christopher Columbus Langdell is generally regarded as the originator of the case method in law schools. See Russell L. Weaver, *Langdell’s Legacy: Living with the Case Method*, 36 VILL. L. REV. 517, 521 (1991). However, when the education and learning process became the focus of study itself, the type of student focused on was the child. KNOWLES ET AL., *supra* note 7, at 35–36.

<sup>78</sup> See generally, *id.* at 1, 59 (tracing the origin of the term).

## 1. Background of Andragogy

Andragogy differs from pedagogy in its focus of who the student is.<sup>79</sup> The principles of andragogy apply widely because the research focuses on the learning transaction instead of the learning goals—enabling the models to apply to any area of teaching.<sup>80</sup> The studies, therefore, are not about why adult learning is in itself important, but more about the differences involved when an adult is learning versus when a child, with a child’s brain and experiences, is learning.<sup>81</sup> The widely-applicable core principles of andragogy are as follows: “(1) the learner’s need to know, (2) self concept of the learner, (3) prior experience of the learner, (4) readiness to learn, (5) orientation to learning, and (6) motivation to learn.”<sup>82</sup> These principles grew from a variety of sources including the “foundation” theory about adult learning: Eduard C. Lindeman’s *The Meaning of Adult Education*.<sup>83</sup>

Lindeman approached adult learning theory from an “artistic stream” perspective, being more philosophically concerned with the approaches of learning intuition and experience—things that vary greatly between adults and children.<sup>84</sup> In developing this “intuition and experience” approach, Lindeman is credited with bringing about a new way of understanding adult learning and of realizing that adults have different processes for learning than do “conventional” learners.<sup>85</sup> These processes are the result of key characteristics of adult learners, such as the role of experience as a rich source for learning and the deep need for adults to be self-directing. Both of these characteristics highlight the

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<sup>79</sup> This is not to say that we should stop considering issues of pedagogy. Pedagogy, as a concept, is long-standing and has deep roots. *See, e.g., id.* at 36. The focus of andragogy, though, simply helps educators understand that when working with adults, new considerations should be used in deciding how best to teach.

<sup>80</sup> *Id.* at 2.

<sup>81</sup> *Id.* Critics of andragogy argue that andragogy should focus more on the goals of adult education in general. *Id.* at 2–3. However, andragogy proponents respond that its broad focus allows the knowledge learned from studying how adults learn, as opposed to why they should, to be used no matter the subject or milieu. *Id.*

<sup>82</sup> *Id.* at 3. Many other factors identified as affecting adult learning are “individual learner and, situational differences, and [the] goals and purposes of learning.” *Id.* (emphasis omitted). Although important and useful in considering each individual’s learning issues, the core principles identified above apply to all adult learners, making the core principles an important base for understanding the adult learner. *Id.* Although the focus of andragogy shows it looks only at the adult learner, in looking at core principles important to the adult learner, one can see similar principles that are no doubt important to teaching children. *Id.*

<sup>83</sup> *Id.* at 37 (citing EDUARD C. LINDEMAN, *THE MEANING OF ADULT EDUCATION* (1926)).

<sup>84</sup> *See id.*

<sup>85</sup> *Id.* at 39–41.

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ever-increasing differences among individuals – differences that increase with age and are quite different for the adult learner when compared to the child learner.<sup>86</sup>

2. Implications of Andragogy

From the above andragogical principles, experiences and self-direction are keys to understanding the adult learner. Each of these is directly related to the laptop debate involving law students.

a. Experiences Brought by Students

Each new group of law students brings new and different experiences to the classroom. As students who have college degrees, at the very least, they have lived longer and have had more varied experiences than students in high school or even most of those entering undergraduate programs. These differences have an impact on their law school education experience – an education they pursue *as adults*.<sup>87</sup>

Different experiences can enhance the learning environment. For example, adults are better suited for experiential learning – learning by doing as opposed to rote memory learning.<sup>88</sup> However, these different experiences also bring negative effects. “As we accumulate experience, we tend to develop mental habits, biases, and presuppositions that tend to cause us to close our minds to new ideas, fresh perceptions, and alternative ways of thinking.”<sup>89</sup> Accordingly, educators of adults have the added challenge of breaking through resistance to new ideas and concepts; this area of research involving learners’ experiences, especially in the area of cognitive psychology, has received much attention.<sup>90</sup>

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<sup>86</sup> *Id.* at 40.

<sup>87</sup> *See id.* at 65–66. In defining “adults,” a variety of definitions can be used: biological, legal, social, and psychological. *Id.* at 64. In looking at the psychological definition, which is identified as that which is critical in addressing learning, law students, by nature of having more study time in schools, should have an accelerated timeframe for becoming, psychologically, an adult. *Id.* However, of course, those students who live at home and who attend a local undergraduate institution, who attend law school at the same university, and who take on few, if any, outside responsibilities are at the other end of that spectrum, having had little opportunity to develop, psychologically, into an adult. It will be interesting to see if, as upcoming generations of students are “coddled” more by having more provided to them, they become more and more immature, countering the arguments in this Article that they should be able to use laptops if desired.

<sup>88</sup> KNOWLES ET AL., *supra* note 7, at 66.

<sup>89</sup> *Id.* I find most interesting how this cannot only create resistance in law students who do not want to give up their laptops, but the same principle can be at work in making professors resistant to the idea of students taking notes in a way other than how the professors did in school.

<sup>90</sup> *See id.* at 140–41.

Two of the primary areas of recent cognitive psychological research on adult learning have focused on schema and information processing.<sup>91</sup> People learn through the use of complex organizational strategies known as schema.<sup>92</sup> We use our schema as a sort of file system for new information—for gathering, understanding, and recalling.<sup>93</sup> When we must create new schema because some aspect of the new information cannot fit into a pre-existing structure, learning is more difficult.<sup>94</sup> Conversely, it follows that when we are able to rely on an existing schema, built from our own experiences, learning is not as difficult, even when learning new material. No doubt, one's schema could involve gathering information by typing it as it is presented. Furthermore, the method by which information is processed may be through the use of word processing programs, utilizing the organizational and outlining capabilities of computer software. These schemata may inform a person's method for learning.

When considering the experiences of our students, we should be mindful that adult learners have a stronger concept of individuality than child learners.<sup>95</sup> For example, clinical psychologist Carl R. Rogers tied "student-centered teaching" to "client-centered therapy" under a hypothesis that "[w]e cannot teach another person directly; we can only

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<sup>91</sup> *Id.* at 140.

<sup>92</sup> *Id.* at 140–41.

<sup>93</sup> *See id.*

<sup>94</sup> *See id.* Similarly, the experiences an adult brings to learning often aid that adult in processing and organizing new material. Information processing theory involves using past experiences as a "filter" to learning. When new information fits best with prior knowledge, we are able to process it more easily; we organize the information in a manner that readily fits in with things we already know.

<sup>95</sup> *Id.* at 40, 44. These individual differences need to be met through more varied teaching techniques. Instead of simply lecturing, adult educators should use more exercises for the class, allow more dialogue, debate, and discussion, and incorporate current material to maintain interest and tie the education process to a broader social purpose. *Id.* at 44 (citing Harold Fields, 12 J. ADULT EDUC. 44–45 (Jan. 1940)). Part of the benefit of the law school Socratic method is that students are exposed to material in a manner that allows them to digest it, work with it, analyze it, and even question it. Although course coverage is reduced due to the time spent in analyzing, questioning, and debating, this is, no doubt, the best way for adult law students to learn the material—as opposed to simply sitting and listening to a lecture. *See, e.g.,* Weaver, *supra* note 77, at 547–61, 591–95 (discussing the many benefits of—and critiques of—the case method style of teaching). Many law classes incorporate the discussion/debate area by using the Socratic method. And in fact, it is using this method that helps students learn more *about learning*. *See* Jackson, *supra* note 77, at 303 ("[T]he process of reasoning that critics of the Socratic method see as "hiding the ball" actually *is* a part of the ball; that is, the process of reasoning is the skill that legal education seeks to impart."). In my (albeit limited) experience, while many professors do try to incorporate some current event information into discussions, fewer professors go beyond the basic discussion/dialogue method and use more innovative teaching techniques, such as group activities.

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facilitate his learning.”<sup>96</sup> The philosophy behind this concept was that individual experiences have a grand impact on each person’s learning process. The focus, then, should be less on the teacher and the teacher’s actions and more on the process of learning occurring with each student.<sup>97</sup> This process may very well include the use of a laptop *while learning*.

b. *The Concept of Self in Adult Learners and Self-Directed Learning*

In addition to the importance of focusing on a student’s learning process, Dr. Rogers identified several other foundational considerations to be used in teaching adults.<sup>98</sup> A central theme to these considerations is the environment in which an adult learns, with the ideal environment being one where the student’s “self” is not threatened<sup>99</sup> and the student is involved in the learning process.<sup>100</sup> It seems, then, that Dr. Rogers asserted a proportional relationship between the student’s interaction with and control over her learning environment and the perceived level of threat to herself. When the perceived level of threat is lessened, the student is better able to learn.<sup>101</sup> Moreover, when working with adults, we are dealing with students who have spent more time developing their own “selves” and therefore have a stronger concept of “self” than the average high-school student or undergraduate freshman. After years of being molded as children, adults begin to resist the same treatment when learning; they need to be viewed by others, including their professors, as persons “capable of self-direction.”<sup>102</sup>

Because adult learners need to be viewed as capable, they strongly resist when others impose their will upon them. If their educators treat them as children, becoming too paternalistic in the process, the adult learners’ resistance engenders an internal struggle between their strong

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<sup>96</sup> See KNOWLES ET AL., *supra* note 7, at 49 (emphasis omitted). Developmental psychologists and social psychologists have likewise contributed to the field of study. See *id.* at 51–52.

<sup>97</sup> *Id.* at 49.

<sup>98</sup> See *id.* Dr. Rogers is credited with being the creator of student-centered learning. See, e.g., Carl Rogers, Carl Rogers Website Home, <http://www.carlrogers.info/index.html> (last visited May 15, 2008).

<sup>99</sup> KNOWLES ET AL., *supra* note 7, at 50.

<sup>100</sup> See generally *id.*

<sup>101</sup> *Id.* It seems to me that this could be even more heightened in the twenty-something year-old law student. The student is in a professional school and has the rights of an adult in all measured areas. Still, a bit of “rebellion” might linger in that this student resists even more when someone tells him the best way to do something—especially if that someone does not know the student’s history, background, strengths, and weaknesses but instead bases the “I know best” on mere assumptions.

<sup>102</sup> See *id.* at 65.

sense of self as an adult and their urge to regress back to feeling like a child learner who is directed by others.<sup>103</sup> The educator can overcome this struggle within her students by utilizing learning experiences that help the students become self-directed, recognizing the students as adults and supporting their ability to direct their own learning process.<sup>104</sup>

The ability to direct one's learning process should not, however, be confused with an educational method in which students are given full control over their educational environment. Under the principles of andragogy, "[a]dults have a self-concept of being responsible for their own decisions, for their own lives. Once they have arrived at that self-concept, they develop a deep psychological need to be seen by others and treated by others as being capable of self-direction."<sup>105</sup> Considering students' self-concepts and the risk of too much outside control, educators should seek to achieve a balance between respecting students' need for self-direction and providing a supportive environment in which the students can continue to develop their abilities to self-direct. In other words, part of the learning process is further development of this self-direction capability.<sup>106</sup>

### 3. Application to the Laptop Debate

For the students currently entering law school, many of their experiences involve using laptops and technology during their undergraduate and perhaps high school years. With each passing year, it is becoming more likely that students' learning processes—their schemata—may very well include having learned how to organize material as they take it in. As such, law students have the increasing capability of making more efficient use of tools, such as word-processing programs, to organize as they go, thereby enabling them to focus on broader aspects of material at a later time. In other words, these students could easily learn to capitalize on using new schemata to make the most of their time. In recognizing that we are teaching adults, we need to be cognizant of (and effectively respond to) experiences students bring to the law school classroom.

Additionally, as we consider our adult students' experiences, we should recognize that we are not our students, nor are our students simply younger versions of us. Most of our students are from a different

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<sup>103</sup> *See id.*

<sup>104</sup> *See id.*

<sup>105</sup> KNOWLES ET AL., *supra* note 7, at 65.

<sup>106</sup> *Id.*

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generation, having experienced different educational settings throughout their pasts. Respecting these differences can help prevent professors from imposing their own wills and ideas, and instead allow adult students to apply some self-direction. At the same time, however, professors can share insight from their own experience, providing a supportive environment for their students and hopefully aiding those students in reaching their fullest potential, even as people who learn differently from their professors.

Furthermore, our students are not all alike; they bring experiences to the classroom that differ from each other. For example, in the learning context, just because one student successfully uses a color-coded highlighting system for briefing cases does not mean that every student should incorporate that system. Students will read at different speeds, brief cases differently, approach creating outlines differently, and yes, take different styles of notes.<sup>107</sup> It is their individual experiences and their individual attempts that will individually help students learn what system works best for each of them.<sup>108</sup>

Finally, when a professor engages in overly-paternalistic styles of teaching, such as dictating a student's note-taking method, the student's sense of self may be overly threatened. Most law students have demonstrated a successful measure of learning in their pasts, and they have developed their specific learning styles. When someone else attempts to direct the learning process forcibly, the resultant internal struggle may hinder further learning and development of that person from a student into a professional.

B. *Varied Learning Styles*

In addition to differences that exist in adult learners based on their ages and life experiences, law students bring other differences to the classroom—different learning styles.<sup>109</sup> These differences are present in any group of students, but the negative implications of the differences are heightened when professors dictate the method in which they think a

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<sup>107</sup> For any professors who require students to bring written case briefs to class, I likewise think doing so is overly paternalistic for a law school setting.

<sup>108</sup> DEAVER, *supra* note 75, at 59. "The important thing is to find a system that you are comfortable with and that aids in your ability to organize and locate materials when it comes time to create your outline." *Id.*

<sup>109</sup> See generally RITA DUNN & KENNETH DUNN, TEACHING SECONDARY STUDENTS THROUGH THEIR INDIVIDUAL LEARNING STYLES: A PRACTICAL APPROACH FOR GRADES 7-12 (1993). Even though this book highlights "practical approaches for Grades 7-12," the information in it about how people learn is applicable to all ages; the approaches in addressing the learning styles in the classroom are what are specifically geared toward the identified age groups. *Id.*

student *should* learn.<sup>110</sup> Thinking that there is one “right way” to learn or that one’s own way of learning is superior to other ways is likely to be ineffective for everyone in a typical law school.<sup>111</sup> Accordingly, professors should use caution in dictating the manner in which students should learn information.

A learning style is not just about the modality used in conveying information.<sup>112</sup> And a learning style is not only about how a person processes information once received and retained. Instead, a learning style is the interaction of concentrating on, processing, and retaining new information.<sup>113</sup>

As education researchers have continued to study learning styles, they have identified specific variables among students that resulted in differences in how students learned when presented with identical methods of instruction.<sup>114</sup> These variables were then narrowed to two broad areas: global learners and analytic learners.<sup>115</sup> Vast issues within the laptop debate emerge by merely looking at those two broad categories.

#### 1. Global and Analytic Learners: Learning Environment Preferences

Global and analytic learners have distinct preferences for how they learn, grouped roughly into five elements: “sound, light, design,

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<sup>110</sup> See, e.g., Paula Lustbader, *Principle 7: Good Practice Respects Diverse Talents and Ways of Learning*, 49 J. LEGAL EDUC. 448, 454 (1999) (“The principle that effective pedagogy respects diverse talents and ways of learning is firmly grounded in theories of adult learning, metacognition, multiple intelligences, and learning styles.”).

<sup>111</sup> DUNN & DUNN, *supra* note 109, at 1. Dunn and Dunn discuss the issues of teaching according to one method in the context of parents thinking all of their children should learn not only in the same manner as the parents did, but also that all of their children should learn in similar manners. *Id.* This, says Dunn and Dunn, is “not likely to be effective for at least some of the siblings because, in the same family, members usually learn in diametrically opposite ways.” *Id.* (emphasis added).

<sup>112</sup> *Id.* at 2. Different modalities include “hearing, seeing, reading, writing, illustrating, verbalizing, or actively experiencing.” *Id.*

<sup>113</sup> *Id.* at 2.

<sup>114</sup> *Id.* at 3.

<sup>115</sup> *Id.* Dunn and Dunn classify the broad areas as global and analytical. Other researchers have used terminology such as left and right; sequential and simultaneous; and inductive and deductive. *Id.* at 6. The discussion here is limited to these two broad areas of learning styles. However, similar analysis could incorporate the multiple intelligences and the variety of usage of laptops and reliance on that use as displayed by students with different intelligences. See, e.g., Kirsten A. Dauphinais, *Valuing and Nurturing Multiple Intelligences in Legal Education: A Paradigm Shift*, 11 WASH & LEE RACE & ETHNIC ANC. L.J. 5 (2005). See Jacobson, *supra* note 70, at 139. Other learning styles that have been studied include the comparisons among verbal, visual, oral, and aural learners. *Id.*

persistence, and intake.”<sup>116</sup> One does not need to have all the preferences of one style to be considered to be more one than the other; having three of the elements as preferences shows a stronger inclination toward that learning style.<sup>117</sup>

Analytic learners usually tend to prefer learning in a structured environment.<sup>118</sup> They enjoy quiet, well-lit, and formal settings.<sup>119</sup> They are students who rarely eat while learning—only afterwards. Further, they feel a need to complete tasks once begun, even if it takes a while to begin.<sup>120</sup>

Global learners, on the other hand, are more comfortable learning in an environment with what many people perceive as distractions, including things such as listening to a radio, engaging in discussions with friends while studying, eating food, persistent tapping, and moving about in some way.<sup>121</sup> Global learners are more likely to prefer working in more dimly lit areas, or even wearing sunglasses.<sup>122</sup> Global learners are also more likely to have “strong tactual perceptual preferences.”<sup>123</sup> This tactual preference also seems to increase as global learners become older.<sup>124</sup>

## 2. Global and Analytic Learners: Teaching Method Preferences

Global and analytic learners not only have distinct environmental preferences for learning, they also have distinct preferences regarding the manner in which material is presented to them.<sup>125</sup> They process information differently and, therefore, will usually be more successful at learning and understanding new material when it is presented in a manner that is more consistent with their processing style.<sup>126</sup>

Analytic learners, for example, prefer details.<sup>127</sup> They like specifics and things that are more step-by-step. Global learners, on the other hand, learn with more success when information is presented by using a

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<sup>116</sup> DUNN & DUNN, *supra* note 109, at 48.

<sup>117</sup> *Id.*

<sup>118</sup> *Id.* at 7.

<sup>119</sup> *Id.* at 7, 47.

<sup>120</sup> *Id.* at 47.

<sup>121</sup> *Id.*

<sup>122</sup> *Id.* at 47, 48.

<sup>123</sup> *Id.* at 48.

<sup>124</sup> *See id.* Interestingly, however, the younger the children are, the more likely they are to be global learners, with the percentage of global learners in an age group decreasing as the group’s age increases. *See id.* at 101.

<sup>125</sup> *Id.* at 102.

<sup>126</sup> *Id.*

<sup>127</sup> *Id.*

broad overview first, highlighting the conclusion that will be reached before reviewing generalities.<sup>128</sup>

Accordingly, when a professor begins a lesson with a “big picture” of the topic to be discussed, global learners have an easier time following the discussion.<sup>129</sup> Global learners are also comfortable with beginning class with something anecdotal. Analytic learners, however, are comfortable simply diving in to the new topic, detail by detail.<sup>130</sup> They could be more likely to view any anecdotal introduction as a waste of time and “veering off topic.”<sup>131</sup>

Several other broad differences exist between the two learning styles. For example, global learners work more successfully in groups while analytic learners prefer direct teaching and individual work.<sup>132</sup> Analytic learners respond better when directions are specific and detailed, even written out in detail. Global learners have less of a need for these details.<sup>133</sup> Additionally, analytic learners learn more successfully when key words are presented to them visually.<sup>134</sup>

### 3. Global and Analytic Learners and Laptops

The research does not address how global and analytic learners use laptops differently in class.<sup>135</sup> However, based on the above information, several conclusions seem evident.

No doubt, global and analytic learners not only process information differently, but they likely record notes differently. For example, in a typical large law school classroom, it would seem that a global learner takes more “big picture” notes, able to later read those same notes and understand how the broad description of ideas, issues, and details relate to each other and interrelated information. In contrast, an analytic learner is more likely to work better with extremely detailed notes, later referencing the recorded details of conversations between students and the professor.

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<sup>128</sup> *Id.*

<sup>129</sup> *See id.*

<sup>130</sup> *See id.*

<sup>131</sup> In surveying students, several report that when professors “veer off topic” is when they are most likely to distract themselves with their laptops. *See infra* notes 161–65 and accompanying text.

<sup>132</sup> *Id.* at 102–05.

<sup>133</sup> *See id.*

<sup>134</sup> *Id.* at 104.

<sup>135</sup> Dunn and Dunn, however, do discuss using computers and the differences between how analytic and global learners benefit from software programs because analytic learners respond better to most computer programs as most are written analytically. *Id.* at 114.

Furthermore, an analytic learner is more likely to be easily distracted when the discussion becomes more generic or veers into “what if” scenarios. If the analytic learner has the details and is comfortable with them, then the learner is less aided by discussions that, to that type of learner, seem too tangential. It would seem to follow, then, that the analytic learner would be more likely to tune out when a discussion seems to become too anecdotal or appears to be off topic. An analytic learner, then, would probably be more likely at that time to do something off topic, whether that be jotting a note to himself, checking e-mail, or even looking up a case or statute for clarification. The analytic learner, then, would likely refocus attention to the discussion when the topic seemed more detail-focused.

Finally, a global learner’s preferred learning environment is much different from that of an analytic learner. Most global learners work well when surrounded by other stimuli—a radio, background conversation, even engaging in their own side discussions while learning. Therefore, perhaps it is the global learner who can handle having a sports ticker on the bottom of their laptop screen or who can engage in an instant-message conversation. An analytic learner, on the other hand, would more likely find such internet applications greatly distracting.

Accordingly, whether a student is an analytic learner or a global learner, he can benefit from using a laptop in a classroom. For many of the students, that use will be much more beneficial than harmful. With that knowledge, banning the use of laptops in a classroom actually takes a learning tool away from students. After all, the greatest concern evinced by students surveyed about laptops in the classroom was the potential loss of a powerful educational tool. Even with the noted distractions, students overwhelmingly preferred access to the learning tool.

#### IV. THE LAW SCHOOL LAPTOP SURVEY

##### *A. Methodology*

The survey concentrated on two major categories: usage of laptops in the classroom and reported distractions. After gathering some demographic information, the survey questions focused on the purposes for using laptops in a classroom. The questions distinguished between distractions caused by the students’ use and distractions caused by other students’ use. Students were also asked to gauge how often they missed something said by both the professor and by other students, due to a distraction caused by computer use. Questions also solicited students’ opinions on whether laptops should be restricted, and whether any

students had previously experienced such restrictions and the noted effect. Finally, the survey contained an area for general comments.

The survey was administered at the University of Memphis Cecil C. Humphreys School of Law, Nova Southeastern Shepard Broad Law Center, and Seattle University School of Law. Second-year students (in the late fall of their third semester or very early in their fourth semester) were the focus of the survey.<sup>136</sup> The survey was given to second-year students because they had more experience than first-year students with different styles of teaching, classroom set-ups, and different seating arrangements. In addition, second-year students were chosen because they would more likely than third-year students feel invested in a survey that could potentially have an impact on their own law school experiences.

The survey was conducted anonymously based on an assumption that students would feel more comfortable providing honest answers, especially about perceived negative behavior (Internet surfing during class) if they would not be personally identified with those responses. Professors of required second-year courses at the participating schools distributed the surveys at the end of class and provided the students with a brief explanation of the research goals that inspired the survey.<sup>137</sup> Students completed the surveys in the classroom and returned them to the professor before leaving.<sup>138</sup>

#### B. *Demographics*<sup>139</sup>

##### 1. Class Status

Full-Time Students	91.1 %
Part-Time Day Students	0.9 %
Part-Time Evening Students	8.0 %

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<sup>136</sup> Six students identified themselves as 3Ls, and two students as 1Ls. Those students' responses are not included in the analysis.

<sup>137</sup> My belief was that students who knew some professors had banned laptops would have a high interest in weighing in on the subject. Of course, it occurred to me that perhaps, then, students would under-report things such as internet usage. The results, however, strongly suggest that under-reporting did not occur.

<sup>138</sup> Accordingly, a high response rate among second-year students was received.

<sup>139</sup> Results based on demographics are reported in Appendix A. I noticed no great differences between gender or age, but I would be happy to share this data with anyone wanting to look more closely at demographic variables.

2. Age

20-27 <sup>140</sup>	76.1 %
28-35	18.2 %
36-43	4.8 %
44-50	0.9 %
51+	0.0 %

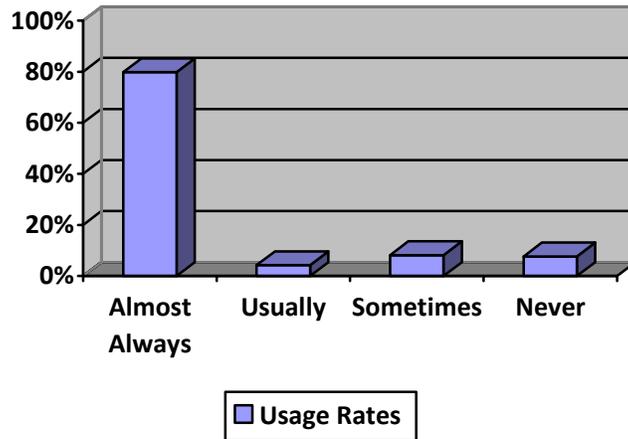
3. Gender

Female	49.4 %
Male	50.6 %

C. The Survey Results

1. Laptop Usage

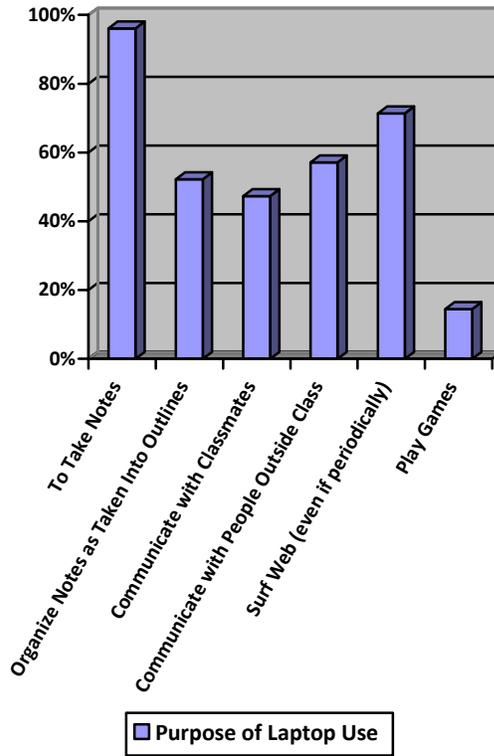
Class Use: If a professor allows laptop usage, I use a personal laptop during law school classes:



<sup>140</sup> The initial age group was selected based on their being a part of the “millennial[]” generation i.e., born after 1980 (in 2007). See, e.g., *60 Minutes: The Millennials Are Coming*, (CBS television broadcast Nov. 11, 2007), available at <http://www.cbsnews.com/stories/2007/11/08/60minutes/main3475200.shtml>.

Among the students surveyed, 79.8% of them reported using their laptops in their law school classes “Almost Always.” Of those surveyed, seventy students (7.7%) used laptops only “sometimes” or “never.” Accordingly, to prohibit the use of laptops would affect not merely a small group of students; any laptop restriction would affect nearly four-fifths of students. Of course, of the students making an inappropriate use of the Internet, implementing a ban would arguably have no effect on their learning. Regardless, the survey showed that students overwhelmingly use their laptops for appropriate purposes.

Purpose of Use: I use a laptop for the following purposes during classes (circle all that apply):



Of all of the students who reported using laptops in class, 96.1% use them to take class notes. Over half of those students use their laptops to organize their notes while they take them. One student commented “I personally use a laptop because I type all notes before class and then

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follow my notes with the discussion.”<sup>141</sup> Another student noted, “Laptops help me take better more legible notes, as I can type faster and more organized than I can write and it saves me time at home not re-typing my handwritten notes.”<sup>142</sup> And a different student remarked, “Laptops make learning, organizing, and maintaining info very helpful. My success in law school is due a lot to the use of my laptop. It was definitely a substantial factor in stimulating me to learn and pay attention in class.”<sup>143</sup> Finally, one student, noting the time management use of laptops, commented, “Most people type outlines, charts, and study materials. Even if they take handwritten notes, they are typing them later. This wastes time.”<sup>144</sup>

Interestingly, some students who, later in the survey, reported that they did not use their laptops for non-class related purposes responded affirmatively to the “Communicate with Classmates” question. Thus, it seems that some students view using e-mail or sending instant messages (“IM”) as a high-tech means for passing notes *about what is happening in class*—asking what a professor said, what page was being read, etc. One student even commented, “While I have checked email and [sent instant messages] during class (a) the majority of my time is spent in class and laptops help facilitate that and (b) almost all IMs relate to class discussions, reading, etc.”<sup>145</sup>

Another interesting statistic is that only 14.5% of students use their laptops to play games. With the availability of wireless Internet access, it appears Solitaire, Minesweeper, and Spider Solitaire are becoming distractions of the past. However, the survey clearly indicated that many students use their laptops to access the Internet: 70.5% admit to surfing the Web.

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<sup>141</sup> Anonymous Student Comments, Laptops in the Classrooms: A Survey of Students’ Perspectives (on file with author).

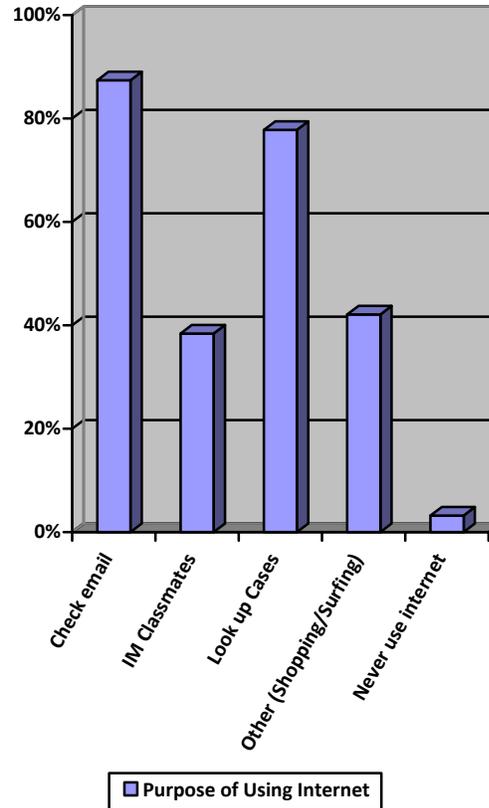
<sup>142</sup> *Id.*

<sup>143</sup> *Id.*

<sup>144</sup> *Id.*

<sup>145</sup> *Id.*

Internet Purposes: When using the Internet during class, I use it for the following purposes (circle all that apply):



The survey next asked those students who used the Internet during class *why* they did so. Most (87.1%) admitted to using the Internet to check e-mail during class. However, nearly as large a group (77.8%) reported using the Internet to look up cases, statutes, or similarly class-related material during class. With over three-fourths of students using the Internet for issues directly related to class, banning laptops would deprive a majority of students of the use of a powerful resource. One student stated, “The most efficient use of laptops in my experience has been for accessing course materials, statutes, cases, etc.[:] [g]enerally not necessary for note taking although helpful for a minority of students.”<sup>146</sup> Another shared that “[l]aptops are useful tools. I’ve frequently used the

<sup>146</sup> *Id.*

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Web to look up info and contribute to class discussion (crim. law, advert. law)."<sup>147</sup> Although many proponents of banning laptops argue in favor of doing so due to laptops distracting students from the class discussion, we might also keep in mind how this sort of Internet usage—accessing cases, statutes, and similar information—might actually *add* to and expand discussions in the classroom.<sup>148</sup>

But students did not use the Internet only for class purposes. Over a third of students (38.4%) used the Internet to “chat” with their classmates—using an IM program. And slightly less than half of the students (42.1%) accessed the Internet for other purposes—general web surfing, shopping, and the like. Only 3.2% of the students who used a laptop in class reported that they never used the Internet during class.<sup>149</sup> Accordingly, it does seem that as long as Internet access is available, students will use it. Thus, it is paramount that educators determine why students cannot withstand the temptation to access the Internet while in class. Is it simply too alluring?<sup>150</sup> Are we failing to maintain their interest?<sup>151</sup> The survey next questioned students about their rationale for non-class related laptop usage.

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<sup>147</sup> *Id.* That same student continued, “To think we could use nothing by [sic] pen/paper in this day and age is ridiculously outdated.” *Id.*

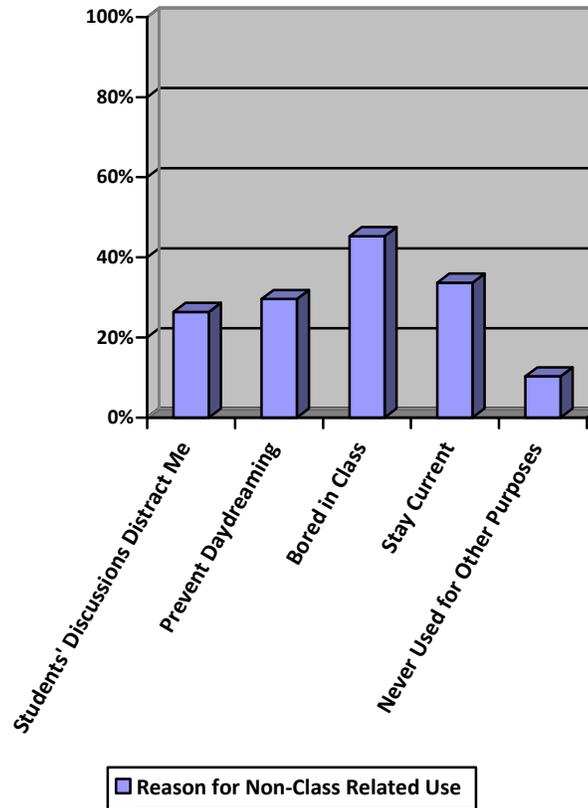
<sup>148</sup> See *supra* note 45 and accompanying text.

<sup>149</sup> For anyone arguing students might not have responded honestly for fear of having the survey results lead to a ban of laptops, this striking number of students who admitted using the Internet indicates to me that, for the most part, students likely responded to the questions honestly. A couple of students did comment about the purpose of the survey and likelihood of honesty in the responses: “People won’t answer these honestly because they want to use laptops[.]” and “Not sure how good of a survey this is. I know exactly what you are looking for and the stance you will take in your article. I would have tried to disguise the questions more. \*My answers are accurate though.” Anonymous Student Comments, Laptops in the Classrooms: A Survey of Students’ Perspectives (on file with author).

<sup>150</sup> See *supra* notes 31–33 and accompanying text.

<sup>151</sup> See *supra* note 42 and accompanying text.

Non-Class Related Use: I use my laptop for purposes other than taking notes because (circle all that apply):



Students were not in agreement over why they used their laptop for a reason other than taking notes. The largest group (45.3%), though, stated that they were bored in class. As mentioned earlier, law school is not about endless entertainment. But if a student is bored, laptop or not, that student is likely to find something else to capture her attention—crossword puzzles, writing notes, daydreaming, or even making a grocery list.<sup>152</sup> As one student commented, “The advantages of allowing students to take notes on laptops outweigh[] the cost of distracting

<sup>152</sup> This last area applies especially to me. Valuing organization, during my years in law school when my class lost focus from the legal issues relevant to the course, I often wrote out lists—things to do, errands to run, and, yes, even groceries I needed to buy. I never used a laptop in class, but I did not have any problem finding something else to do when the discussions seemed irrelevant.

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students. Students who aren't paying attention won't pay attention whether distracted by a laptop, writing a note, or otherwise."<sup>153</sup> Another said that "[i]f you restrict laptops there will just be more doodles in notebooks. If someone wants to pay tuition to surf the net, more power to them."<sup>154</sup> And finally, one student tied his web surfing to the pace of discussions, stating, "Some professors linger on a topic fully understood and I get bored so I do other things like check my email."<sup>155</sup>

The next highest group, 33.7%, report using their laptops for non-class related purposes to "stay current" – e-mailing, instant messaging, and otherwise "stay[ing] on top of what's going on." Most of these students are primarily of the millennial generation,<sup>156</sup> and they have grown accustomed to instant access to information, instant feedback, and accessing most services needed online.<sup>157</sup> It seems to follow, then, that these students, more than in generations past, view frequent e-mail-checking and instant messaging as a normal way of life, not necessarily requiring full attention or taking away all of their focus.<sup>158</sup>

Finally, students also reported that they used their laptops for non-class related purposes because (1) the class discussions with other students (the Socratic dialogue) distracted the students from the law and did not aid in the students' understanding (26.1%) and (2) they would daydream anyway even if they did not have a laptop (29.0%). Certainly, one could argue that these students do not appreciate the value of the Socratic dialogue, but prohibiting laptops from a classroom would not address this issue; only an honest discussion with students about *why* we use certain teaching methods will likely address this issue.<sup>159</sup> And as one

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<sup>153</sup> Anonymous Student Comments, *Laptops in the Classrooms: A Survey of Students' Perspectives* (on file with author).

<sup>154</sup> *Id.*

<sup>155</sup> *Id.*

<sup>156</sup> See *supra* note 140.

<sup>157</sup> See Richard T. Sweeney, *Reinventing Library Buildings and Services for the Millennial Generation*, 19 LIBR. ADMIN. & MGMT. 165, 168 (2005) (explaining the need for future libraries to be designed with the millennial generation in mind with more online access and journals and remote services).

<sup>158</sup> See, e.g., Scott Carlson, *The Net Generation Goes to College*, CHRON. OF HIGHER EDUC., Oct. 7, 2005, at A34, available at <http://chronicle.com/free/v52/i07/07a03401.htm>.

<sup>159</sup> I had just such a conversation with my first-year Contracts students this past spring. On the first day of the semester, I opened the floor to them for comments and questions about the class. Most of their comments revealed their lack of understanding about the process of legal analysis, for example "Why do we focus on particular facts of a case?", and by spotlighting those issues, I was able to refocus their attention to looking at more than just black-letter rules of law. Hopefully, they also understood that when I questioned them on particular facts, it was not done paternalistically to see how closely they had read, but instead to highlight how, why, and when the facts change, the results might shift—even when applying the same black-letter rule of law.

student noted, "Personally, I find being able to use a laptop helpful. While many people use them as a distraction, these same people tend to zone out in class regardless."<sup>160</sup>

In general, though, many students discussed the level of engagement in a class or the expectations of the professor and tied that to the students' non-class related-laptop use. One student noted, "A laptop is not as distracting of attention as much as a professor who uses little enthusiasm and/or is not effective at capturing students' attention."<sup>161</sup> Another said, "As always, I don't think the laptops are the issue. If I don't want to take notes, I can doodle on paper or even skip class."<sup>162</sup> Still another commented, "I only surf the Internet when I would have been daydreaming or zoning off otherwise," and another said, "If the professor actively engages the class in discussion and writes stuff on the board[,] whether or not a laptop is used will have no effect on learning. Laptops aid in note taking and organization. If a teacher is boring, laptops merely take the place of daydreaming and doodling."<sup>163</sup> One student noted that "A great prof[essor] who uses power points and engages us is a class where I won't play around online."<sup>164</sup> And one other stated succinctly, "Very strict, hard professors, I never surf. It's the ones that don't call on you that I surf in."<sup>165</sup>

## 2. Laptop Distractions

Having confirmed that indeed, students overwhelmingly access the Internet and use their laptops for non-class related purposes, the question still lingered: is laptop usage distracting students from learning and from the classroom? Thus, the survey addressed distractions caused by laptops.

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<sup>160</sup> Anonymous Student Comment, *Laptops in the Classrooms: A Survey of Students' Perspectives* (on file with author).

<sup>161</sup> *Id.*

<sup>162</sup> *Id.*

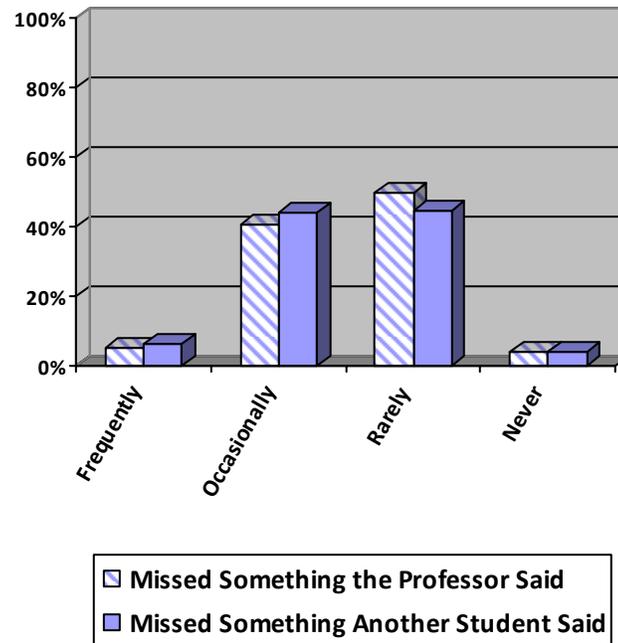
<sup>163</sup> *Id.*

<sup>164</sup> *Id.*

<sup>165</sup> Anonymous Student Comment, *Laptops in the Classrooms: A Survey of Students' Perspectives* (on file with author).

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Distraction by Own Use: When using my computer, whether on the Internet or just saving/organizing a document such as class notes, I have missed something said in class:<sup>166</sup>



Between 45% and 50% of students admitted that they had missed something said in class due to their own laptop usage. On the one hand, this seems to lend strong support for prohibiting the use of laptops in the classroom. As one student exclaimed on the comment section, “Save me from myself!”<sup>167</sup> However, between 49% and 55% of students also reported that they rarely or never miss anything said in class based on their own use of a laptop. Comments include, “We’re adults. We should be able to use laptops if we choose” and “I think use of laptops is a personal choice. If people don’t focus because of it, it’s their own fault.”<sup>168</sup> One student balanced the distractions with the benefits gained by taking notes on a laptop and noted, “Regardless of the distractions

<sup>166</sup> The survey distinguished missing something the professor said from missing something a classmate had said. The results, however, showed only minimal differences between the two, with only slightly more students reporting missing things a student said than what a professor had said.

<sup>167</sup> *Id.*

<sup>168</sup> *Id.*

my laptop causes, I find it much easier to take notes because I type much faster than I write and I am able to focus on what the prof[essor] is saying/doing while typing.”<sup>169</sup>

This last comment highlights one view of the way laptop usage affects note taking that has not previously been addressed. Most professors in favor of banning laptops because of a detriment to note taking argue that the process of choosing what to write down is the way in which the student learns and understands the material.<sup>170</sup> But as the student above noted, using a laptop enables students to easily transcribe every word and pay *more* attention to the class discussion. Perhaps, then, for some students—especially a student with an aural learning style—using a laptop for note taking is exceedingly beneficial.<sup>171</sup>

Conversely, one student commented, “Personally, I find that I retain knowledge better if I take notes by hand and then copy them onto my computer.”<sup>172</sup> This student’s use of the word “personally,” though, seems to highlight the heart of the issue: all students are different, and what works best for one might not be the best method for another.

While students did report being distracted, many students demonstrated that they learned from their own use, or misuse, and remedied any ill effects of laptop use. One student commented, “Because I found my own use of my laptop to be too distracting/tempting, and I missed a lot of professor comments and student comments, I voluntarily stopped using my laptop, and found that I paid better attention and took better notes.”<sup>173</sup> Another noted, “Most of my laptop use was as a 1L. I have yet to use a laptop as a 2L. I personally find them distracting.”<sup>174</sup> And one student said, “Honestly, it depends on the person. With our generation, many people concentrate better [with] the added stimulation. With me, my GPA was really low

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<sup>169</sup> *Id.*

<sup>170</sup> See *supra* notes 50–73 and accompanying text.

<sup>171</sup> See Jacobson, *supra* note 70, at 155. “Aural learners learn well from listening . . . [and] may improve their absorption of information by seeking out additional opportunities to listen.” *Id.* Although not using a laptop for note taking is one method indicated for minimizing distractions while listening, a student who was able to take those notes without having to stop and think about what was being written would have the benefit of focusing more attention on listening while in class, while also having the notes to refer to later to reinforce the learning that took place while listening in class.

<sup>172</sup> Anonymous Student Comment, *Laptops in the Classrooms: A Survey of Students’ Perspectives* (on file with author). That same student, however, continued, “Moreover, this semester with Con Law and Business Entities, I took too many notes for that to be efficient and had to switch to using my computer to take notes altogether. I appreciated being able to do that, otherwise it would have been very difficult to get all of the information.” *Id.*

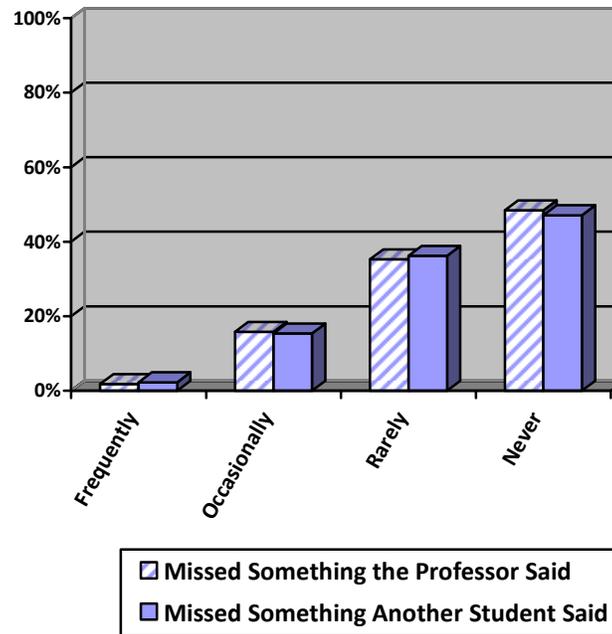
<sup>173</sup> *Id.*

<sup>174</sup> *Id.*

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last year so this semester I tried not using my laptop to see if there [would be] improvements with handwriting instead of typing. We'll see."<sup>175</sup> Another is selectively using his laptop, stating, "This year I have implemented a 'bring laptop only when necessary' policy and noticed that I take in a lot more of what is being said in class."<sup>176</sup> Finally, one student showed that it depended on what was happening in the class, saying, "I have had to focus myself in some classes such as evidence and constitutional law to close my laptop and take hand notes because being integrated in class discussion is important in the understanding of class."<sup>177</sup>

Distraction by Others' Use:<sup>178</sup> Because I was looking at a classmate's computer screen, I missed something . . . said during a class discussion:



An initial review of the responses to how often students' laptop use was distracting to other students was surprising. Professors have

<sup>175</sup> *Id.*

<sup>176</sup> *Id.*

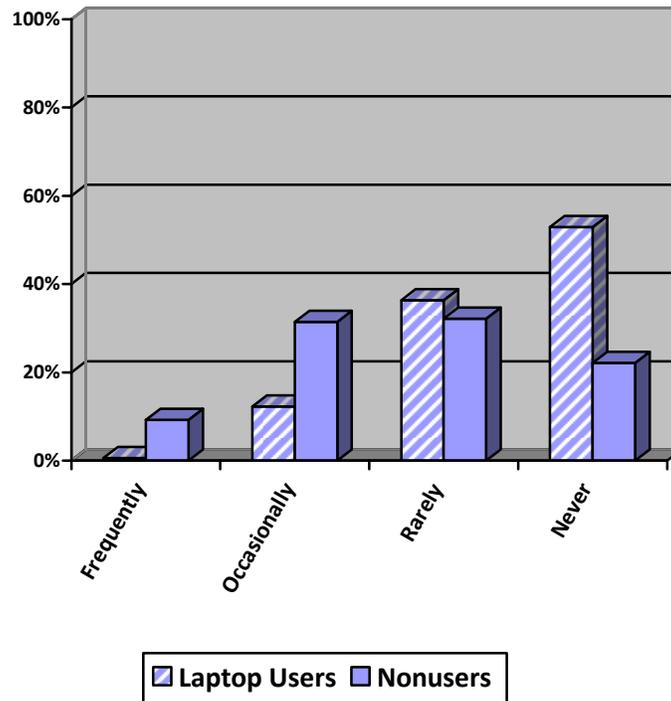
<sup>177</sup> *Id.*

<sup>178</sup> Only 1.4 % of the responders stated that they could not view another students' laptop screen from where they sat.

complained of how awful it is to compel a student to look at another student’s laptop screen. After all, it is difficult to stay focused when a classmate in front of you is shopping for shoes, exchanging IMs, or checking the NCAA tournament scores for the day. But the results do not support what many, including myself, have long suspected.

As I reviewed the results with more discernment, I began to notice a trend. I separated the written comments of frequent laptop users from those comments by students who never or only sometimes used a laptop in class. These results led to an enlightening conclusion that changed my classroom management. The chart below displays the astonishing results yielded by segregating the written comments between laptop users and non-laptop users.

Distraction by Others’ Use:<sup>179</sup> Because I was looking at a classmate’s computer screen, I missed something said . . . during a class discussion:



<sup>179</sup> The percentages for “missed something a professor said” and “missed something another student said” have been averaged for comparison of laptop users to nonusers.

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For the students who used a laptop, over 50% of them reported that they never missed anything as a result of looking at a classmate's laptop screen. Strikingly different, though, of the students who did not use a laptop in class only 20.0% reported never missing anything said by a professor and only 24.3% never missed anything said by another student. As for those students who frequently or occasionally are distracted by others' use, less than 13% were laptop users (and of those 13%, less than 1% report "frequently" being distracted), compared to 40% of nonusers.

The results indicate that if a student is using his or her own laptop, the student is not looking over at what other classmates are doing. However, nonusers *are* distracted, and this is the worry that professors should be addressing.

In their written comments, many students noted these distractions. One student commented, "I hate looking up and seeing people play games online and not paying attention. It's distracting for me and I can't imagine what's it's like for them."<sup>180</sup> Another said, "Ninety percent of students who use laptops surf the Internet during class. They visit MySpace, read articles, shop[,] etc. The use of laptops should be banned."<sup>181</sup> And another showed a great deal of frustration in saying, "Most people use their laptops in inappropriate ways, and I want to break their laptops."<sup>182</sup> One student's view was directly in line with that of many professors who choose to ban laptops: "Though I don't get distracted by others' use of surfing, I'd prefer that everyone be engaged."<sup>183</sup> Of course, even a complete ban will not engage the daydreamers or the doodlers—activities students insist would persist even without laptops.<sup>184</sup>

But another student noted that "[laptops] are very distracting when not used for note taking but some of the smartest students are often the ones surfing the net so I guess they may affect us more than them. Should be some ban."<sup>185</sup> Another said, "Laptops are fine, but some use them for distracting purposes, such as playing card games, etc. This can be annoying to those sitting behind them. I suggest that if you want to play games in class—sit at the back of the classroom."<sup>186</sup> And another

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<sup>180</sup> Anonymous Student Comment, Laptops in the Classrooms: A Survey of Students' Perspectives (on file with author).

<sup>181</sup> *Id.*

<sup>182</sup> *Id.*

<sup>183</sup> *Id.*

<sup>184</sup> See *supra* notes 161–65 and accompanying text.

<sup>185</sup> Anonymous Student Comment, Laptops in the Classrooms: A Survey of Students' Perspectives (on file with author).

<sup>186</sup> *Id.*

seemed to want professors to do more to hold students accountable: "While I have occasionally missed a comment in class, I feel that I am more distracted by other students' use of laptops during class. Certain students are habitual offenders, and I feel that some Proffers [sic] are better than other[s] at recognizing those students (and calling on them to stop the practice)."<sup>187</sup>

On the other hand, some students blame any feelings of distractedness on themselves. "Honestly, the world is a distracting place. If someone next to me is playing games or surfing, how does that bother me unless I choose to let it[?] If I pay attention, then I pay attention but it's on me."<sup>188</sup> And another student, not in favor of a full ban, thought the idea of using the situation as a teaching opportunity was a good idea: "[Laptops] [c]an be extremely distracting when student[s] in front of me are surfing the web or playing games, but I don't think a ban is a good idea. Some sort of instruction on Internet use might be a good idea."<sup>189</sup>

Indeed, not all students thought that just because some students misused laptops they should be banned. As one noted, "It is the student's choice not to learn if they [sic] are on the Internet. Why ban the use of laptops if other or the majority of people learn better with them?"<sup>190</sup> Another said, "It ought to be the choice of the students, based on his or her learning styles, whether or not to utilize laptops during class."<sup>191</sup>

### 3. Effects of Banning

Before turning to the final questions about whether the students believed laptops should be banned, the survey sought some context for their opinions, seeking to discover who among them had experienced such a ban.

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<sup>187</sup> *Id.*

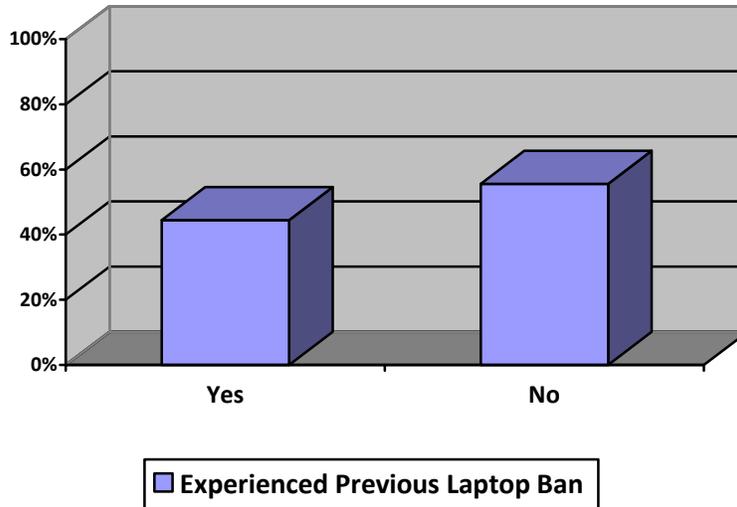
<sup>188</sup> *Id.*

<sup>189</sup> *Id.*

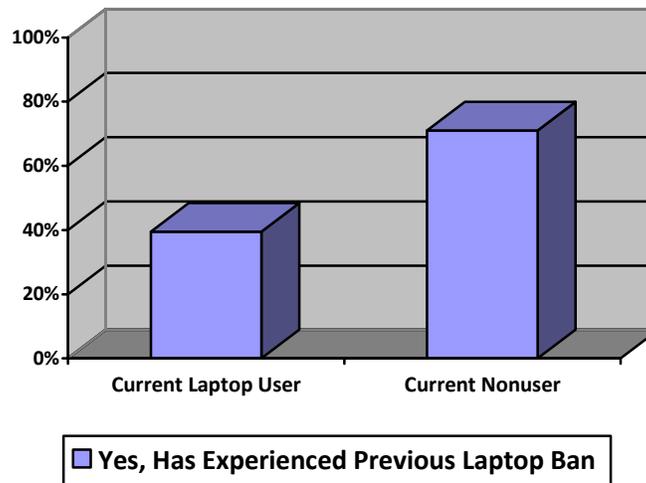
<sup>190</sup> *Id.*

<sup>191</sup> *Id.*

Previous Classroom Ban: Have you ever been in a course in law school in which the professor prohibited the use of laptops?



Considering the number of law professors who have discussed banning laptops, these results were not surprising. However, having already sorted the data based on laptop users versus nonusers, I next examined the responses to the “previous experience with a ban” question similarly sorted.



These results were neither expected nor previously considered. Interestingly, among students who used their laptops almost always or usually, only 39.5% had been in a classroom where laptops were banned. In contrast, among students who reported they rarely or never used a laptop in class, 71% had prior experience with a prohibition against laptops. The results are much too different to have occurred by chance.

The true cause for such disparate statistics remains unknown. However, it appears that students who had been in a classroom with laptop restrictions were subsequently more likely to not use a laptop in class. These results support the anecdotal comments by students indicating that they voluntarily gave up their laptops, having recognized the attendant distractions. On the other hand, not all students who had previously experienced a ban abandoned use of their laptops later. Many students made the choice to continue to use a laptop even though they had been in an environment in which they could compare effects of use and nonuse.

Two conclusions seem evident. First, as noted earlier, students are different from each other. Many students reported managing laptop distractions with relative ease. Others, though, noted that they were too distracted and needed to give up their laptops. This shows that students are capable of making this decision themselves.

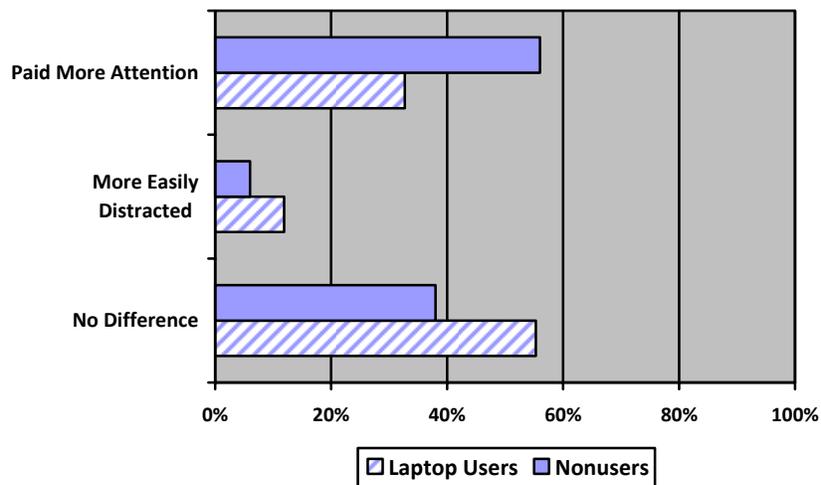
The second conclusion is more telling. Although several students noted that they learned they were too distracted by their laptops to continue using them, whether all of those who do not use a laptop now would have made that decision had they never had a prohibition forced upon them is not known. I suspect, though, especially considering the high percentage of students who are not in favor of a laptop ban, that at least some students would not have made such a decision on their own.

As part of the inquiry about whether students had previously experienced a laptop ban, the survey also inquired about the effects of such a ban.

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Effects of a Previous Laptop Ban:<sup>192</sup> In a classroom where laptops have been banned, I noticed the following effects (on attention level, note taking, and class discussions):

Attention Level in Class:

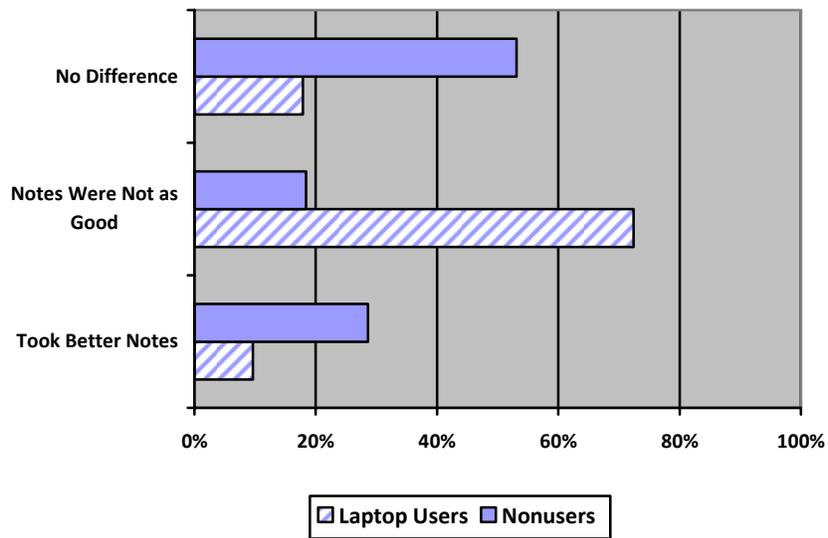


Fifty-six percent of students who had previously experienced a ban and no longer used laptops indicated that they paid more attention in classes without laptops. What is not apparent is whether this high percentage is due to the absence of laptops in the classroom or the consequence of some of the students voluntarily giving up the use of their laptops *after* experiencing a ban. Regardless, it seems most likely that the majority of students who switched from using a laptop to not using one fell into the category of students who were distracted with laptops present.

Among those students who usually or almost always use laptops, 55.3% noticed no difference in their attention, but 32.7% reported that they paid better attention in class without laptops. However, these students continued to use laptops despite the recognition of their adverse effects. This statistic can most likely be attributed to the students' use of a laptop for note taking.

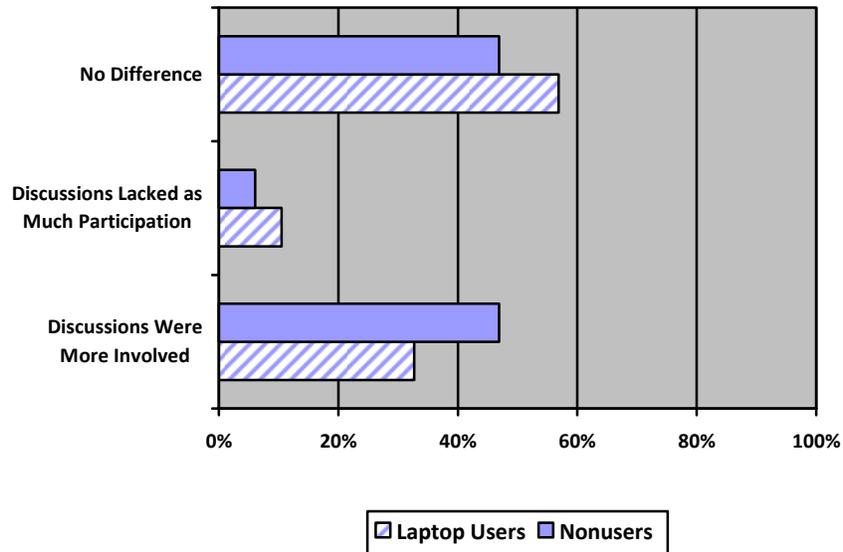
<sup>192</sup> This question was answered only by those students who had previously been in a class with a laptop ban.

Note Taking:



Of the students who used laptops, 72.4% reported that without a laptop their notes were not as good. There were a total of only fourteen students (3.1%) who indicated they took better notes when laptops were banned; I suspect, or at least hope, that these are some of the students who had previously used a laptop then ceased doing so after their positive experiences in a class with a laptop ban.

## Class Discussions:

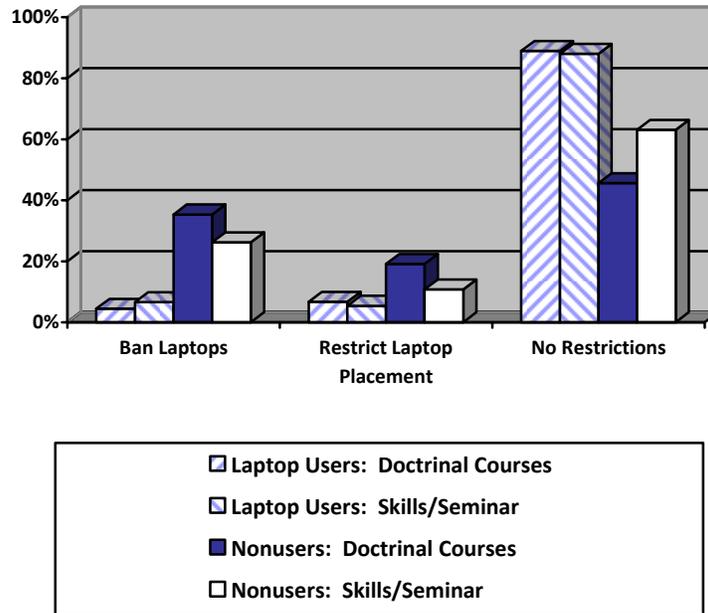


Finally, the survey asked students if they noticed any difference in the level of classroom discussion when laptops were banned. Most students, whether they used a laptop or not (56.9% and 46.9%), noticed no difference in the level of classroom discussion. However, the same percentage of nonusers who noticed no difference was the same percentage of nonusers who noted discussions were more involved (46.9% for each category). And 32.7% of the laptop users noted the discussions were more involved. Regardless of the differences in attention level or class discussions, students, especially those who used a laptop, did not want restrictions placed on them regarding laptop usage.

#### 4. Student Preferences

The final part of the survey addressed the bottom-line: whether a laptop restriction should be used in the law school classroom. However, having taught a skills course in the past, I asked for students to distinguish between traditional doctrinal/casebook courses and skills or seminar courses and opine about the advisability of a laptop ban within each course type.

Laptop Ban Recommendation: I prefer the following course model:



The statistics did not reveal a meaningful distinction for laptop users between doctrinal and skills or seminar courses—approximately 88% of students indicated they preferred the unfettered right to use their laptops in either setting. However, among students who did not use a laptop, 45.6% did not want a restriction in doctrinal courses and 63.1% did not want a restriction in skills or seminar courses. Approximately one third (35.3%) of the nonusers favored a complete ban on laptop use in the classroom.

The insignificant statistical distinction between laptop bans in doctrinal and skills/seminar courses was contrary to what I expected before I conducted the survey. Based on various conversations and e-mails, I had the impression that students need a laptop less in a seminar or skills course (courses without a final exam) where the amount of note taking is often much lighter than in doctrinal courses (courses with a final exam).<sup>193</sup> Thus, it is unclear why the statistics indicate the converse.

<sup>193</sup> See, e.g., Maxwell, *supra* note 1, at 131.

5. Where to Go from Here

a. *Laptop Placement: The Laptop-Free Zone*

Students use laptops, but the results of the survey showed that laptops do have the potential to distract others in the room—one of the primary reasons professors have cited to support a complete ban on laptop use. But the survey showed that the students who are most likely to be distracted are those who are not themselves using a laptop. With the insights gained from the survey, I changed my course policy in the fall of 2007. The following is an excerpt from my Contracts I syllabus:

CLASS MATERIALS AND LAPTOP-FREE AREA . . . Regarding laptops, to enable those students who prefer not to use a laptop to avoid the distractions of others' laptop usage, laptops may not be used by students in the first two rows of the room (subject to space modification, depending on the number of students who prefer to limit their distractions or the number of students preferring to use laptops). Students who do use laptops shall not use the Internet during class time for any purpose. Violations of this policy may result in the restriction against laptops for all students . . . Exceptions to these restrictions will be permitted when required by the office of disabilities.<sup>194</sup>

On the first day of the semester, the first two rows of my classroom were filled with students with pens and paper; students with laptops comprised the majority of the remaining six rows. And we all talked about it—this unique policy. I shared my insight about distractions (based on the preliminary survey results from the previous year) with my students, and we discussed using the Internet. I told them there would be times we would access the Internet, and there would be times I would call upon a student with a laptop to look something up. We also talked about attentiveness, respect for each other (and me), and the truth that their expressions gave away what they were doing. I also assured them that they could move from the “laptop area” to the “laptop-free zone” at any time during the semester.

Throughout the semester, we certainly encountered times when a student was off-task. Once, a student mentioned something he had just found online, enabling me to respond, with a mix of humor and

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<sup>194</sup> Jana R. McCreary, Contracts I Syllabus (Fall 2007) (on file with author).

sincerity, by asking him how he found something online when he was not to be on the Internet. On a few other occasions, noting students' distracted looks, I used the opportunity to remind them of issues involved with being distracted from the discussion at hand. And in the spring, when one student allegedly spent the bulk of the class time shopping for shoes, her classmate came to me after class and discussed the behavior, explaining how distracting it was. I, in turn, privately discussed the matter with the student. I invited the reporting student to let me know of any further problems. No further complaints were made.

The students also responded well. Several, in passing, mentioned they appreciated the policy because it provided an opportunity for an optimum learning environment for both groups of students—those who preferred laptops in the classroom and those who preferred to not have them in the classroom. Setting aside a laptop-free zone within the classroom helped to minimize both visual distractions and keyboard noise. One student shared the student's views on the anonymous student evaluations at the end of the semester: "I love McCreary's rule allowing laptops but limiting them to rows 3 and above! This allows for those preferring to use a laptop to do so without disturbing those who may potentially be distracted."<sup>195</sup> No students reported, anonymously or otherwise, any negative aspects about the policy.

*b. Laptop Use: A Laptop Vacation*

The survey highlighted that some students seem to benefit from not using their laptops. It also appears that some students made changes to their classroom use *after* they experienced a laptop ban, realizing that they were able to take effective notes without a laptop. On the other hand, the survey revealed that almost all of the students who use a laptop use it to take notes, and many of those students also use the laptop effectively as a tool to aid in organization and time management. Therefore, an outright ban would prevent students from using an effective educational tool.

Additionally, experience shows that students have different educational needs. Thus, if educators want to help students make decisions that are in their best interest, providing them with a trial period in which they do not use a laptop seems the best solution. After all, it appears that a number of students, when comparing the benefits and detriments of using a laptop, would—and should—choose to not use one. Of course, the strong suspicion is that unless some external influence encourages them otherwise, many students will not, on their

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<sup>195</sup> Anonymous Student Evaluation, Contracts I (Fall 2007) (on file with author).

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own, give up their laptops to be able to experience and compare the different methods.

Accordingly, based on these survey results, I plan to include a week or two of no laptops in my future courses.<sup>196</sup> In doing this, again, I will talk honestly, openly, and directly with my students about this process. I will share with them the considerations to weigh during that trial period, and I will encourage them, ahead of time, to access and review information on good note taking (reminding them, of course, of the benefits of being able to take good notes by hand, such as when they interview clients in the future). And more importantly, I will share with them the conclusions I have drawn based on these survey results. After all, it is one thing for me, who never used a laptop in school, to presume them to be too distracting. But it is something entirely different for a student who attended law school only a year ago to elucidate the distracting and beneficial nature of laptop use in the classroom.

V. CONCLUSION

We have many roles as professors, and one of those roles is to teach.<sup>197</sup> It is in that role that we owe our students our best efforts to educate them. In answering that call, then, we must strive to educate students in the best way—*for them*. In other words, our role of teaching should be more about what works best for the students and less about what makes us most comfortable.

Naturally, we have disagreements about how best to teach. And fortunately, we have the freedom in academia to choose how to manage our individual classrooms. But even with that academic freedom, we need to ensure that our decisions about running the classroom are truly about the students' needs and not simply about what makes us comfortable. A professor's bruised ego caused by some students' lack of

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<sup>196</sup> This idea was first presented to me during the 2008 AALS Teaching Methods Section Program. Several of us presented issues about the laptop debate, and I shared the preliminary results of the data reported here. As part of that presentation, Professor Janice Kosel spoke about using laptops in the classroom, and she shared with the group her method of having her Legal Methods students give up not only laptops but taking notes for one week. See Janice Kosel, "I Can't Hear You"—*The Lament of the Low-Achieving Law Student*, (unpublished manuscript) (on file with author). I thought having students attend class without a laptop for a trial period was a good idea when I first heard it, and with these results supporting that method, I will now certainly employ the method in my own classroom in the future.

<sup>197</sup> The American Association of Law Schools identifies five distinct areas in which professors owe a duty—or have "responsibilities" (1) to students, (2) as scholars, (3) to colleagues, (4) to the law school and the university at which they teach, and (5) to the bar and the general public." ASSOCIATION OF AMERICAN LAW SCHOOLS, HANDBOOK 91 (2007), available at [http://www.aals.org/about\\_handbook\\_sgp\\_eth.php](http://www.aals.org/about_handbook_sgp_eth.php).

attention while using their laptops does not justify the permanent deprivation of other students' use of laptops as educational tools.

Our students are adults, and they bring to the classroom individual experiences and methods of learning. Moreover, their concept of self and need to feel like they have some control over their learning can influence how well they are able to learn.

One tool many of our students use is the laptop computer. They have learned how to record information, organize it, and very likely, even to process information through the use of a laptop. If we are called to educate our students, then, we should not create an impediment to their learning by forcing them to suddenly rely on a new method—especially if their preferred method, their schema, has not proved to be a detriment *to their learning*.

In addition, our students have varied learning styles. For those styles, laptops can be quite beneficial in helping some students manage their learning environment. Whether a student is an analytic learner who benefits from having a laptop to assist in taking in and managing the voluminous information in class, or the student is a global learner who needs a more stimulating environment in which to learn, laptops could be an integral educational tool.

Yes, as feared, students with laptops do, in overwhelming numbers, access the Internet during class time. But overwhelmingly, students are willing to tolerate that temptation, and even that distraction, in order to have access to a valuable learning tool.

Of course, some students are more easily distracted by others' laptop use. Accordingly, in order to provide the optimum learning environment, professors have a responsibility to provide an environment free from those distractions. But we do not have to choose to favor one group over the other; we can provide an optimum learning environment for both by setting aside a laptop-free zone within the classroom, minimizing both visual distractions and keyboard noise.

Setting up a zone is not about patrolling the aisles to see if a student is not paying attention; we should be able to do that through regular classroom interaction. And when students are slouched behind a large screen, we need to address the hiding—not the computer.

Furthermore, by providing students a short time period, such as a week during the semester during which they experience class without a laptop, professors can assist students in making a more informed decision about the tools they choose to use in the classroom. Admittedly, implementing even a short-term ban could be viewed as paternalistic. However, requiring all students to forgo laptop use for one or two weeks, creating a situation in which they will have to assess their

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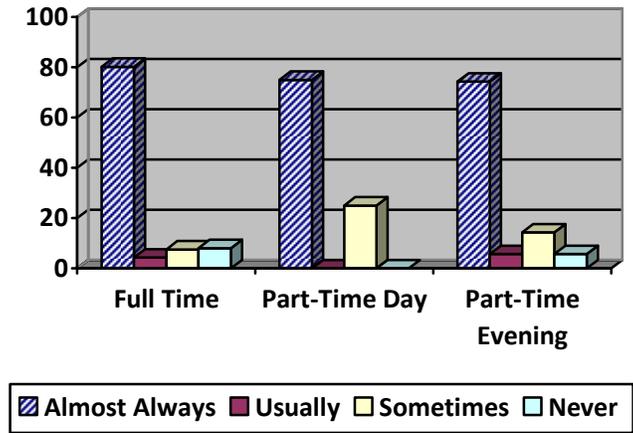
own performance with and without a laptop, should enable them to make a more informed decision about what to do after that temporary ban is discontinued. Once the ban is lifted, those students who truly benefit from using a laptop can make an informed decision to return to laptop use.

It was in seeing this great desire to continue to use laptops among one group of students along with a smaller, but very real, desire to be free from the distractions laptops cause among another group of students, that I developed my classroom policy of the laptop-free zone, banning laptops from the first few rows of the room. Usage is allowed, proper usage is discussed and encouraged, and an area free from laptops is provided for students who feel they are distracted by others' use. Additionally, I hold students accountable for not being involved in class discussion—as much as I would if they were handwriting notes. Finally, realizing some students learn, once they experience a ban, that they learn better without a laptop, I will begin to institute a brief laptop vacation, assisting my students in learning not only about law, but also about themselves and how they are best able to learn.

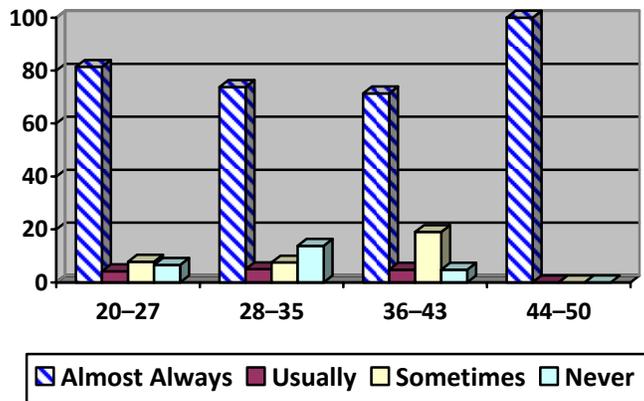
APPENDIX

**Demographic Results**

Usage by Class Status



Usage by Age



Usage by Gender

