



# The Internet in the personal finance course

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## Abstract

A revolution is occurring as textbook authors struggle with how to effectively incorporate the Internet into the personal finance textbooks and course. This paper considers three questions associated with this revolution. What is the current degree of Internet integration? Where might we be headed with this new technology? Will this integration make for a better course? The current degree of Internet integration is reported in Tables 1 and 2. An argument is made that we may be headed to an eventual elimination of the textbook, as we know it. There is some preliminary evidence that this will make for a better educational experience. © 1999 Elsevier Science Inc. All rights reserved.

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## 1. Introduction

There is a significant event that is happening in the field of personal finance, and no one seems to be making an effort to assess that event and to explore the implications of that event. This event is the incorporation of the Internet into the Personal Finance course. In just a period of a few years, the textbooks in this field have gone from not even mentioning the Internet, to various degrees of actively incorporating the Internet. This raises some interesting questions. What is the current degree of Internet integration? Where might we be headed

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with this new technology? Will this integration make for a better course in terms of student comprehension and skill acquisition?

These questions should be of great interest to faculty who teach in the area of personal finance. They should also be of interest to practitioners in the personal finance area. One question facing all faculty as technology alternatives continue to appear is which ones are of passing interest and which ones will grow in significance. Faculty who want to avoid having their courses, their teaching, and their research skills become outdated have to decide in which technologies to invest their time and efforts. This paper should help anyone who is undecided about the role of the Internet as to whether learning more about the Internet is a worthwhile professional commitment. Practitioners should also be interested in these questions as the answers may impact how they relate to future customers and the types of skills that future employees will bring to the job.

The basic premise of this paper is that the Internet is a significant incorporation of technology into the Personal Finance course. The first section of this paper provides some informal history of the growth of technological integration into finance courses. Next, a proposal as to the ideal integration of the Internet into the Personal Finance course will be presented. We will then consider why that ideal is not currently being achieved. We next turn to an empirical examination of how the Internet is currently being incorporated into our textbooks in this field. The last section will consider whether there are any substantive benefits to the students from this integration.

## **2. A review of the technological integration**

In the 1960s there was little if any technological integration into finance textbooks. The high-tech method of problem solving was the slide rule. As calculators came into popular usage, some textbooks integrated this technology by providing instructions on what data to enter and which keys to punch to solve particular problems. For some textbooks today, this is still the extent of the incorporation of technology.

The next technological development was to provide problem-solving disks in conjunction with a text. Some disks had proprietary software, and some worked off an existing spreadsheet application such as Lotus 1-2-3. For some textbooks today, this is still the extent of the incorporation of technology.

In the late 1980s, email began to grow in popularity and usage. Although email was not incorporated into textbooks, it became one of the primary methods of communication among faculty. In the late '80's, many professors were proclaiming that 1) they weren't computer oriented enough to learn it, 2) their institutions were unable to provide it, and/or 3) there would not be enough email being sent to justify a commitment to learn to use it. By the mid '90's, a revolution had occurred in that so many faculty had email accounts and communicated with email that the professional associations such as the FMA and AFS found it worthwhile to include email addresses in their membership books along with all the other contact information. As we approach the end of the decade, some of these associations are beginning to make email the primary form of communication with their memberships. The point here is that within a short period of time, faculty have gone from where only a few used

email to where most now use it. This change required only that the hardware and software become available and that people started to realize the potential of the medium.

As recently as five years ago, there was little or no attempt at integrating the Internet into finance courses. I offer two reasons for this. Five years ago, most finance faculty did not have access to the Internet nor had little or no idea as to what was available on the Internet. At this time, most faculty were just coming into active daily usage of email. The Internet was the logical extension of email. Now, all finance faculty are aware of the Internet, most are likely familiar with at least a few sites on the Internet, and some are attempting to ascertain how the Internet may be effectively integrated into their courses.

The Personal Finance course is the logical place for the initial efforts at integrating the Internet. This is because a great quantity of the material on the Internet is aimed at the individual. Much of the material on the Internet is aimed at selling products to the individual, but this is not what we mean by personal finance. A good portion of the material on the Internet is aimed at providing information and even solutions to problems and questions that people have in the area of personal finance. Some of this information is provided in the hope that the users will be so pleased with the information provided that said users will buy the services or products of the site sponsors. However, some of the information is provided by entities whose goal is simply to be a provider of information. These sites include government sites (.gov), educational institution sites (.edu), and nonprofit and not-for-profit sites (.org).

### **3. What is the ideal Internet-integrated course?**

The wealth of information and calculators currently available on the Internet is so extensive that one could teach a highly effective course in Personal Finance without resorting to a primary text. The ideal integrated course starts with a Home Page for the course. On or before the first day of class, the instructor needs only to provide the students with the URL of the course's Home Page. The first link on the course Home Page would be the syllabus. As a web page, the syllabus can contain many links of potential use to a student. For example, instead of just listing the prerequisites for a course, the instructor can make the prerequisites into links that tie into the syllabi of the prerequisite courses. Thus, if a student has had a similar course elsewhere, that student can self-validate that other course by seeing if the course he or she had matches the syllabus of the prerequisite course.

Most publishers now have web sites to support each textbook (much more on this topic later). As these web sites sometimes include material found in a study guide, as well as supplemental material for the textbook, a link to the publisher's site for the selected text would seem to be mandatory.

The instructor's name on the syllabus could also serve as a link to the instructor's resume. As many faculty members have not yet posted their own resumes, some business colleges provide a college-wide directory of faculty with biographies for most or all faculty members. This way, instructors don't have to feel any embarrassment about providing an autobiography if asked by the students about their background and experiences.

Each class meeting date could be listed as a link to a separate page. On this separate page,

the instructor could list basic information such as what homework would be due for that class, what the learning objectives for that class would be, and even a full outline of the topics to be covered in that class.

The final addition to the class Home Page would be a link for each “chapter” in an on-line, virtual textbook. The chapter would then be a series of links covering all of the appropriate material for that topic. Some connecting material between URLs would likely be appropriate. Similarly, some end of chapter material such as a summary, list of key terms, and problems may have to be inserted.

#### **4. Why doesn't the ideal exist?**

If the ideal is within reach, then why don't we observe it? The primary reason we do not observe anyone providing such a course boils down to the economics of doing it. First, the preparation of such a course would be a gargantuan effort, perhaps equivalent to writing a book. No one writes his or her own book for just one course. A second reason is the obsolescence factor. The author of this on-line text would have to spend time every month, if not every week, checking to make sure all of the links are active and replacing those links where the URLs have been modified or the links have disappeared. The modification of URLs and their disappearance is known as link rot. No one can afford this much time to keep one course up-to-date.

Yet another reason we have not seen the abandonment of a primary textbook is that a well-written text can help motivate students and serves as an alter ego to the professor in the course. It is like a secondary instructor in the course in that it reinforces what the professor is saying, and sometimes gives the professor someone to play off of.

If the ideal is not possible due to economic incentives, then let us consider situations that might be just short of the ideal. For example, one person could put together this course and “publish” it for all to use. The word publish is in quotes because in the Internet world, publishing only means providing one's URL to others. In fact, because of the ability of the commercial search engines to find and document anything that are uploaded on the Internet, publishing almost means simply uploading a web page to the Internet. The answer to the question of why we don't observe this nearly ideal text is, again, the economics of the situation. With free distribution of a textbook, there is little incentive for anyone to undertake an effort equivalent to writing a full-length text.

This last drawback can be overcome in a couple of different ways. One is to make the on-line text a pay site. That pay sites can be successful has been demonstrated by the proliferation of adult sites on the Internet. (Of course, this observation about adult sites is based on what the author has read and heard and not personal observation.) This approach has several problems. One is students could easily share the cost of a text. Thus, five people could share the cost of the site registration, and then all share in the password provided.

The second way to overcome the economic incentive problem is to publish a booklet that contains all of the introductory and connecting material as well as the end of chapter material. In other words, a typical chapter in a textbook today that has 25 pages or so of text and five

pages of end of chapter material, could be replaced with a chapter that runs for five pages, and has two pages of end of chapter material. Thus, the author would now be able to participate in the royalties from the sale of a book. In fact, such a booklet could contain the URLs for at least some of the sites that are key to each chapter, rather than having all of the sites reached through a textbook Home Page. The obsolescence factor could be dealt with through an erratum on the Internet. Because the erratum is cumbersome, it would be appropriate to update the booklet on an annual basis. Thus, although the booklet would have a smaller royalty than a full-length text, the smaller royalty would be offset by the fact that there would be little in the way of a secondary market for such a booklet, and a new edition could be sold every year.

Even if a way is found to effectively publish the book described above, there would still be problems in getting people to adopt such a book (whether it is an on-line pay-site book, a booklet that links to a web site, or a booklet with lots of sites listed). The most significant problem is that an adopting instructor would have to check out many of the sites in order to know how to use each one. Two other problems are that web addresses have an obsolescence factor (as previously mentioned) and an availability factor. Let us consider each of these problems.

This author's own experience in doing web-related writing in recent years is that the *annual* obsolescence rate of web addresses is about 40%. This 40% rate merits additional comments. First, if one sticks to the *home page* address of large, established organizations (e.g., [www.ssa.gov](http://www.ssa.gov), [www.schwab.com](http://www.schwab.com), and [www.aaii.org](http://www.aaii.org)), then the obsolescence rate is at most a few percentage points. If one uses detailed addresses within established organizations (such as a page requiring four links from the home page to arrive at), then the obsolescence rate may approach ten percent. In many cases the page is still there, it is just that the details of the direct address may change. Finally, the sites provided by individuals and small firms (such as a law or an accounting firm) will have an attrition rate of over 50%. It also appears that the attrition rate for successful pages is declining. That is, web pages that have been successful in attracting traffic are more likely to stay. Thus, if a person identifies say 1,000 sites that are useful in a Personal Finance course, then one-year later, maybe 600 of these sites would still be active. However, two years later, a fairly high portion of this remaining number of sites would still be active.

The last problem to adoption is the availability factor. Servers go down. No one likes to be in front of a class doing a lecture and dial into a web site only to receive a notification that said site is not responding at that time. Similarly, it would be frustrating to a student to be reading a text and needing to go to a particular site, only to find that site is not currently available. There are two solutions to the availability problem. One is to have a back-up site available. For many topics and calculators, there is more than one site for each such topic or calculator that would do the trick. Second, in terms of class presentations, an instructor might prepare a transparency of key sites in advance in case an unique site is not available, and perhaps even have handouts available for the student.

These supply-side and demand-side problems of an Internet text will take time to overcome. Although an all-Internet-based text is the future, it likely will be a long time before we see such a text.

## **5. What is the current state of Internet integration?**

Until we have figured out how to overcome the supply and demand problems of an all-Internet based course, we will be in a transition phase of moving from the traditional textbook-based course supported by such things as PowerPoint slides, spreadsheet templates, and personal financial planning disks. I am calling the current state of textbook publication the transition phase based on two observations. First, the current edition of almost every personal finance text has Internet-based material. Second, almost none of the prior editions of each of these books provides any Internet based material beyond perhaps a few references in the instructors' manuals.

## **6. What does the transition phase look like?**

To clarify what this transition phase looks like, Tables 1 and 2 show most of the personal finance texts now being adopted at colleges and universities. Table 1 lists the authors, book titles and publishers, and copyright dates of the specific books reviewed for this study. It also provides a summary of the Internet usage and integration. The final column is a rating of these books based on the *comprehensiveness* of their Internet usage and integration in each text. [This is NOT, repeat, NOT a rating of the quality of the texts or an endorsement or criticism of any type. This rating is simply a measure of the degree of usage and integration of the Internet.] Category I texts are the ones that appear to be at the cutting edge of usage and integration of the Internet. Generally, they provide lists of links at the end of the chapter, a publisher sponsored web site that includes additional exercises and problems along with web links that will provide the solutions, resources for the professor, and resources for the student. Category II texts provide a subset of what can be found in a Category I text. Category III texts provide only an occasional listing of web sites. There is no comprehensive incorporation or utilization of the Internet in these texts.

In establishing these categories, the use of the Internet by the publisher is not considered Internet integration into the text material. Thus, the parts of the publishers' web sites that provide the opportunity to order additional material such as study guides and instructor's manuals are not counted in the categorization process. Similarly, the parts of the web sites that are purely promotional are also ignored. Promotional items include information on the authors, the text, and other texts by the same publisher.

Based on these criteria, the Winger and Frasca, Rosefsky, Keown, and Kapoor, Dlabay, and Hughes texts are Category I texts. Category II texts include Ramaglia and MacDonald and Gitman and Joehnk. Category III texts include Garman and Fergue, Boone, Kurtz, and Hearth, and Ho, Perdue, and Robinson.

## **7. What will the next round of textbooks look like?**

We will not jump to the ideal state, described in Section 3, any time soon, and primarily for the reasons described in Section 4. Nonetheless, we are moving in that direction. The

Table 1  
Current status of the Internet in various personal finance texts

Author <sup>a</sup>	Book (publisher)	Copy-right	Internet content	Category
Bernard Winger and Ralph Frasca	<u>Personal Finance</u> , Fourth Edition (Prentice Hall)	1997	A short list of web sites is at the end of each chapter. In addition, there is a web site that supports the text. The URL is <a href="http://www.udayton.edu/sba/wf/pf.htm">www.udayton.edu/sba/wf/pf.htm</a> . The key features of this web site are exercises that provide links to online resources. There are also a large number of general links. Other support material is also found at this site, including downloadable files of PowerPoint presentations, Spreadsheet Templates, and a What's New section.	I
Robert Rosefsky	<u>Personal Finance</u> , Seventh Edition (John Wiley & Sons)	1999	Throughout each chapter, icons have been placed next to paragraphs and other material. Each icon provides a reference link at the following site: <a href="http://www.wiley.com/college/rosefsky/modl/">www.wiley.com/college/rosefsky/modl/</a> . Each reference link then provides links to sites with information relevant to the topic at hand, or provides a problem with links to one or more calculators that solve that problem. There is a Decision Maker Software available, a Business Extra Site which provides articles from the <i>Wall Street Journal</i> , and Rosefsky's newsletters and updates.	I
Judith Ramaglia and Diane MacDonald	<u>Personal Finance: Tools for Decision Making</u> (Southwestern College Publishing)	1999	A short list of web sites is at the end of each chapter. In addition, there is a web site that supports the text. The URL is <a href="http://www.swcollege.com/bef/ramaglia/ramaglia.html">www.swcollege.com/bef/ramaglia/ramaglia.html</a> . The first element in this site is titled Internet Applications. These are the same as the links at the end of each chapter. There was also a section titled Author Updates, although this section had no content at the time of writing.	II
Arthur J. Keown	<u>Personal Finance: Turning Money into Wealth</u> (Prentice Hall)	1998	Sites are listed in the margin at the end of the chapter. However, the publisher also supports a web site for the book ( <a href="http://www.prenhall.com/persfin">www.prenhall.com/persfin</a> ). There are five activities for each chapter. These are: Chapter Interactive Exercises, Web-based Chapter Resources, Hot Topics, Chapter Articles from Kiplinger's, and a Fun Button.	I
Jack Kapoor, Les Dlabay, and Robert J. Hughes	<u>Personal Finance</u> , Fifth Edition (Irwin, McGraw-Hill)	1999	At the end of each chapter, some of the Projects and Application Exercises direct students to use the Internet, but not all such exercises provide a specific address. In addition, a short list of web sites is presented at the end of each chapter. The substantial number of on-line resources is listed in Table 2. The publisher also supports a web site for the book: <a href="http://www.mhhe.com/business/finance/kdh/">www.mhhe.com/business/finance/kdh/</a> .	I

(continued on next page)



Table 1 (continued)

Author <sup>a</sup>	Book (publisher)	Copy- Internet content right	Category
Kwok Ho, Grady Perdue, and Chris Robinson	<u>Personal Financial Planning</u>	1998 This book contains no Internet-based material.	III
Lawrence Gitman and Michael Joehnk	<u>Personal Financial Planning</u> , Eighth Edition (Dryden Press)	1999 There are some references to Internet addresses in some of the chapters. At the end of each chapter are exactly five exercises, each of which provides an address.	II
E. Thomas Garman and Raymond Forgue	<u>Personal Finance</u> , Fifth Edition (Houghton Mifflin)	1997 The Preface states that: "Every chapter offers Internet addresses for businesses, nonprofit organizations, and government agencies useful to the student of personal finance. Web sites are indexed for convenience." However, almost no such addresses were found.	III
Louis Boone, David Kurtz, and Douglas Hearth	<u>Planning Your Financial Future</u> (Dryden Press)	1997 The Preface states that: "We integrate the personal computer throughout the text. We highlight personal-finance computer software and Internet resources." I found only one page that contained Internet addresses, and this had seven addresses.	III

<sup>a</sup> The authors are listed in reverse alphabetical order, a sequence that should be used more often to eliminate discrimination against people whose names start with letters near the end of the alphabet.

transition phase will be a series of steps as each new edition of books comes out, and as some of the books seek to jump to the lead in terms of what they do with the Internet. So, what is the next step?

First, I think most of the books will move to incorporate some or all of the criteria used to define the category I texts. That is, most of the Category III texts will at least move to Category II in terms of providing a more comprehensive set of links. These links could be provided in the chapters, at the end of the chapters, or on a publisher sponsored Internet site. The Category II texts will most likely move to Category I in that they will expand their use of links, providing both substantive lists of links and exercises that are tied into links. The most interesting development will be what the texts currently in Category I will have to do to keep at the front of the pack. I think the next step is to move from providing simple lists of Internet addresses (Category III texts), tangentially related problems and exercises (Category II texts), or complex web support sites (Category I texts), to actually integrating web sites into the presentation of the text material. Two examples are provided to show what this means.

### 7.1. Example I: the tax chapter

Most personal finance texts provide a figure of Form 1040. In fact, by the time most textbooks are published, the Form 1040 reproduced in the text is usually one year out of date. This form may be obtained from at least 20 different sites, including the IRS site ([www.irs.ustreas.gov/prod/forms\\_pubs/forms.html](http://www.irs.ustreas.gov/prod/forms_pubs/forms.html)). If a text simply instructs the student to view Form 1040 at any one of several sites, it would not be necessary to print it as a figure in the book.



Table 2  
Specific comparisons of Internet-material

Authors	End of chapter listings	Chapter-related exercises	On-line links	Other material on-line
Winger & Frasca	113	101 (on-line)	383	Spreadsheet templates, PowerPoint presentations, What's New section
Rosefsky	–	163 (on-line)	–	Decision Maker software, Business Extra Site, Rosefsky's Newsletter & Updates
Ramaglia & MacDonald	75	–	–	PowerPoint presentations
Keown	112	148 (on-line)	60	Hot Topics, Articles from Kiplinger's, Fun Button
Kapoor, Dlabay, & Hughes	222	–	136	PowerPoint Presentations, Instructor's Manual, Personal Finance Links (which are grouped by topic area), PFP software (which allows for downloading the software planning package that accompanies the text, and S&P Personal Wealth (which is a stock market based web site), and an On-Line Learning Center. For each chapter, this Learning Center provides Chapter Overview, Learning Objectives, Key Terms, PowerPoint, Pretest, Post Test, Supplementary Cases, Supplementary Reading, Study Questions, Related Web Sites, Summary, and Spanish English Glossary.
Ho, Perdue, & Robinson	–	–	–	–
Gitman & Joehnk	(See chapter related exercises)	75 (in book)	–	–
Gitman & Forgue	3	–	–	–
Boone, Kurtz, & Hearth	7	–	–	–

Most personal finance texts include a table showing the Tax Rate Schedules. The Tax Rate Schedules show the tax due and the marginal tax rates for each income level and each filing status. As with Form 1040, the current version of these tables is available on the Internet ([www.irs.ustreas.gov/prod/ind\\_info/tax\\_tables/tax\\_sched.html](http://www.irs.ustreas.gov/prod/ind_info/tax_tables/tax_sched.html)). By directing the student to the web site with these tables, a book immediately eliminates one factor contributing toward obsolescence.

### 7.2. Example II: the housing chapter

A critical decision that many people must make at least once in their lives is whether they should buy or rent. The topic is discussed in most textbooks, but this author is not aware of any books that work out an extensive, time value based problem or exercise for the financial

solution to this problem. This author used to do this in his lecture on housing. The presentation of the necessary assumptions (and a nontrivial exercise requires quite a few assumptions), the step by step process of deriving the numbers one needs to know, and the present value application for the solution would typically take at least 45 min. Now, I go to a web calculator that provides this solution ([www.calcbuilder.com/cgi-bin/calcs/HOM10.cgi/FinanCenter](http://www.calcbuilder.com/cgi-bin/calcs/HOM10.cgi/FinanCenter)). This calculator not only provides the financial answer in present value terms, but it also gives several critical graphs that show the importance of key variables to the solution of the problem. The buy versus rent decision can now be thoroughly discussed in about 15 min, and the topic more completely analyzed than it ever has been before, including what-if scenarios. The incorporation of a web site such as this into a text will allow much greater discussion and elaboration on the relevant issues, and much less time spent on the mechanics of setting up the problem.

Another key topic of the housing chapter is how one locates a house and how one selects a realtor. There are several sites that provide a checklist that would help a person define what he or she is really looking for. Once the parameters of the desired property are defined, then one wants to see as many properties as possible that would meet these criteria. The site [www.realtor.com](http://www.realtor.com) has emerged as the national search site for homes in most communities. In my community, I can find more homes listed on the [realtor.com](http://www.realtor.com) site than I can in any of the sites supported by local brokerage firms or our local newspaper. It is inconceivable that the next round of textbooks could present the topic of finding a home without directing the student to this site as part of the chapter text.

## **8. Is this forecast unanimously shared?**

This forecast of what the next round of texts will look like is not unanimously shared. The major objection to the concept of building a text on Internet connections, as discussed earlier, is concern of what happens when link rot occurs. This is a legitimate concern, but it can be dealt with in several ways. One is volume. For many topics, one could provide multiple addresses that would work. With a normal attrition rate, at least some of the sites are likely to still be working when the next edition of the book replaces the current one. Also, the text could be accompanied by a publisher supported web page that contains a frequently updated list of corrections, additions, or deletions for web sites provided in the text. A second approach is not to give any web sites in the text. In lieu of each web site, the text could provide a reference number to a publisher supported web page, and have the student find the address there. Without the text itself, access to the web page would have little value to others.

A second objection is that not enough finance professors know how to work effectively with the web, and this will prevent such a book from being sufficiently widely adopted to be successful. Two years ago, this objection might well have been the telling indicator. But as was argued at the start of this paper, it appears that we are at a watershed in terms of the web becoming a standard tool of usage by most faculty. Just as we went in a few short years from a few faculty using email to almost all faculty using email, so we will move from a few faculty accessing the Internet regularly to most faculty accessing it regularly.

A third objection is that too many students would not be able to access the Internet and

thus such a book as described above would not work. Three years ago, this author gave as a term paper project in his Personal Finance course the task of each student locating 15 web sites, and explaining how he or she would use each site to make personal financial decisions. Two years ago, the project was changed to having the students create their own web pages in which they defined personal finance questions they would likely be asking themselves in the next few years and they provided links which answered those questions. Despite having hundreds of students go through this course in the last few years, not one student ever asked the instructor how to find a site on the Internet, or even how to create a web page. Most of my students can create vastly better looking web pages than I can! In fact, the most likely source of movement toward the incorporation of more Internet material in the textbooks will be the students themselves. As students find these sites on the Internet that they deem of value, they will start asking those instructors who are not using the Internet why these sites are not being mentioned and utilized. This will lead these instructors to adopt textbooks that provide the strong Internet usage and incorporation so that they will not have to spend many, many hours themselves finding these sites.

## **9. Will students benefit from this integration?**

The most important person in the classroom is, of course, the student. As described in the historical section, there has been an evolution of technology in the classroom. However, there has been (to this author's knowledge) little effort at ascertaining whether or not the student has benefited. What has happened is that the skills the student has acquired has changed. For example, when financial calculators became universal and were integrated into many textbooks and required by many instructors, no one seemed to ask if the student was better off using a calculator. Many students have learned to solve time value of money problems by memorizing which keys to use to enter the data. They sometimes cannot write out the time value of money formulas associated with those problems. The amount of time spent in class and on homework doing calculations is greatly reduced. But, is their knowledge of time value of money greater or less?

The enrollment in the Personal Finance course can be divided into two groups. The largest group is those students for whom this is their only exposure to this subject. The other group is those who wish to major in this subject area (perhaps in preparation for obtaining their CFP designation). For the first group, their motivations in taking the course usually are to learn about the issues in which they will have to make personal financial decisions during their lifetime. Because of the way in which technology, laws, and practices change over time, we cannot in one course hope to teach these students everything they will need to know in their lifetimes. We can only hope to give them a framework on what are good personal finance decisions and practices today, and the ability to acquire the necessary knowledge and skills in the future. Internet integration should serve both of these objectives well. Internet integration should allow the student to access information supplemental to the text, as well as information that is more timely than can sometimes be provided in a text. Internet integration will also provide the student with the skills to acquire personal financial information over his or her lifetime. Students taking personal finance as a one-time course are

usually more interested in learning how to get answers to questions than in learning how to solve problems themselves. The Internet calculators are great in this respect.

The Internet integration will likely still be helpful for students wanting to major in this area, but not as critical. The access to supplemental and more up-to-date information is just as valuable for these students, as is the knowledge of how to access such information on the Internet. However, students majoring in personal finance need to know the mechanics of how to solve the various types of problems in the course. They need to know the theory behind the calculations being performed. Internet integration is unlikely to do this. However, such students will also be taking more than just this one course in this area. It is likely they will learn the theory and skills of doing these calculations in their other courses.

It would be nice to collect some empirical data on whether Internet integration makes the student more knowledgeable and more skilled. An obvious technique is to run multiple sections of the course, and use the Internet in some classes and not in others. The problem here is that these students will in fact be learning slightly different information and skills. For example, the student in the non-Internet course may learn how to calculate a mortgage payment given a mortgage rate, but the student in the Internet course will learn sites that will do this calculation, as well as how to shop for a mortgage on the Internet. Thus, does the student learn more, learn quicker, or learn better with Internet integration is a moot question. The real question is whether the student is better prepared to handle his or her personal finance problems over his or her lifetime. We can only make a professional guess on this question, I do not think we can empirically answer it.

Having said this is an unanswerable question, there is some anecdotal evidence that Internet integration improves the educational experience for the student. Session 6 of the 1999 Academy of Financial Services annual meeting was a tutorial entitled “Teaching Personal Finance Online.” One of the presenters had heard the presentation of an earlier version of this paper at the 1998 meeting, and took up the challenge of attempting to construct the ideal Internet integrated course. The course developed was a distance learning course. The presenters noted that compared to another course taught on-campus in the traditional approach, the students in the Internet integrated course appeared to be more satisfied with the course and to have learned more.

## 10. Summary

There are four points to this article:

1. The current and forthcoming editions of Personal Finance textbooks on the market mark a major turning point in terms of going from being virtually unaware of the Internet, to incorporating the Internet.
2. The most aggressive next set of Personal Finance textbook editions will incorporate the Internet into the chapters as a crucial part of the text, rather than just presenting it as supplemental information and optional activities.
3. The Internet will eventually replace our Personal Finance textbooks as we currently

think about them. We may use only shorter reference books that provide the transition to move from web site to web site.

4. The Internet integration is changing what the student learns in the Personal Finance course, and what skills the student acquires. We can only surmise that these changes will make the students better prepared to manage their personal finances over their lifetimes.

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