

The Course Letter Grade Calculator: A Supplement To Midsemester Grades

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Abstract

Various universities require mid-semester grades to increase retention; however, this information doesn't enable students to continuously assess their progress and doesn't pass grade "ownership" to the students. The course letter grade calculator (Grade Calculator) is an Excel tool developed for students to enhance transparency and helps re-orient student perspectives to the view that the student is responsible for their grades. The Grade Calculator enables students to continuously assess what they must do to earn their desired course grades and serves as a reminder that they must work to earn their grades. The purpose of this paper is to discuss the utilization of the Grade Calculator and the results of an exploratory survey performed to elicit viewpoints of introductory accounting students regarding the tool's usefulness. Results indicate that most of the surveyed students viewed the Grade Calculator positively and perceived their instructors as having clear and fair grading policies. Students suggested that having a Grade Calculator in all of their classes would reduce stress surrounding final grades. Anecdotal observations suggest that student complaints and inquiries about grades significantly decreased upon use of the Grade Calculator.

Keywords: *Grade Complaints, Grade Transparency, Grade Calculator, Retention, Ownership of Grades, Responsibility of Grades*

Introduction

Students tend to view a grade as what the professor gives to the student, instead of what was earned by the student. Instead of being the student's responsibility for earning the grade, grading is often viewed by students as the responsibility of the instructor for giving the grade (Sue, 2007). Research suggests that students tend to overestimate their academic performance at the end of a course (Berenson et al., 2015; Hossain & Tsigaris, 2015). Some faculty members have even received emails from students saying they were "shocked" by their low grades. Studies have found that students' expectations are more realistic when the students are provided with information about their academic performance throughout the semester (Hossain & Tsigaris, 2015). Although various universities require faculty to submit mid-semester evaluations to provide timely feedback to students, this information is only provided at one point in time during the semester (Yale College Council, 2018). However, continuous feedback on grades may have a positive effect on student achievement and retention (Saeed & Mohamedali, 2022).

The purpose of this exploratory paper is to present a tool, the Grade Calculator, developed by one of the authors, and used by all the authors, to enhance the transparency of the grading process, enable students to continuously assess how they are doing throughout the semester, and to minimize questions and complaints about final grades from students. This paper also examines the viewpoints of introductory accounting students regarding the usefulness of the Grade Calculator. The authors find that the Grade Calculator helps to reestablish student perspectives to the view that the student is responsible for his or her own grade, that the student earns his or her own grade as opposed to the professor “giving” them a grade, and that grades are not haphazardly assigned by the professor at the end of the semester.

Background

Although student complaints about grades are not a new phenomenon (Ackerman & Gross, 2020; Cole et al., 1977), many faculty believe that there has been an increase in the degree to which students feel entitled to receive high grades (Ackerman & Gross, 2020; Trzesniewski, et al., 2008; Twenge, 2006; 2009), ultimately leading to an increase in the number of student complaints over a grade (Ackerman & Gross, 2020; Twenge, 2009). Singleton-Jackson et al. (2010) define this sense of entitlement as a student attitude that they are owed something from their instructor apart from what they earn from their effort.

Giving students information on how they can improve future grades helps improve students' performance and retention (Saeed & Mohamedali, 2022). Yet, many professors wait until the end of the semester to provide feedback about grades, and still other professors do not give any feedback until the final grades are posted (Yale College Council, 2018). Millennials, generally defined as those born between 1981 and 1996, place a high importance on timely and perpetual feedback about work performance (White et al., 2021). Likewise, Generation Z, generally defined as those born approximately 1997 or later, wants constant feedback and views decisions as being unfair if they do not completely comprehend how those decisions are made (Lev, 2021; Schroth, 2019). The majority of current college students consist of those from Generation Z (Pew Research Center, 2020).

Grades - Complaints, Entitlement and Expectations

One possible reason for increased complaints from students may be attributed to the students' comfort zone with digital communication. Students contact professors much more via email, as has been demonstrated in online learning (Zuckweiler et al., 2004). Before email, students would generally need to complain to the instructor over the phone or in the professor's office, which could have been intimidating. Research suggests that students who are generally not comfortable speaking to the professor in person may be more comfortable communicating with the professor electronically, resulting in an increase in communication between professor and student (Al-Shalchi, 2009; Arbaugh, 2000; Author, 2001; Comer & Lenaghan, 2012, Rainsbury & Malcolm, 2003). As compared to in-person encounters, individuals are less inhibited when communicating online (Martin, 2013). The asynchronous effects of email, in other words, the lack of an immediate response, makes individuals feel less restrained to communicate online. Also, the lack of visibility of the individual to whom one is communicating makes those people more comfortable communicating online, resulting in them feeling less inhibited (Comer & Lenaghan, 2012; Suler, 2004). As stated by Suler (2004, pp. 322 – 323), “Not having to cope with someone's immediate reaction disinhibits people.” Furthermore, Suler (2004) explains that people reduce the perceived authority and status of individuals when communicating online, since various authoritative cues, such as nonverbal communication and dress, are often absent in cyberspace.

Grade Transparency

A study by Hossain and Tsigaris (2015) suggests that student final grade expectations decrease as students acquire information about their actual academic performance. According to Homes and Smith (2003), transparency in the grading process enhances the student belief that grades have been computed fairly and minimizes the amount of student questions about why their grades differ than the grades they expected. Walvoord and Anderson (1998), as reported by Homes and Smith (2003), report that providing students with a “grading sheet” that details the weight of each grade helps minimize the number of questions from students asking why their actual grades received were not the same as what they expected to receive.

Various colleges have required some sort of midterm grading report to provide timely feedback to students. Examples of universities and colleges that require midterm assessment include Princeton University (see <https://registrar.princeton.edu/academic-calendar-and-deadlines>), Hofstra University (see <https://www.hofstra.edu/provost/mid-semester-advisory.html>), Metropolitan College of New York (see https://www.mcny.edu/pdfs/academicsupport/A_Students_Guide_to_Mid-Semester_Assessments.pdf), Gateway Community College (see <https://www.gatewayct.edu/Academic-Calendar>), and Huntington University (see https://www.huntington.edu/uploads/documents/academic_catalog_undergraduate_peoria_2020-2021.pdf). However, midterm grading reports only provide feedback on academic standing in a class at a single point in time. Additionally, even if there is a midterm grading system, many faculty members still do not communicate clearly and/or on a timely basis, leaving students uncertain on how their grades are calculated (Yale College Council, 2018).

A learning management system (LMS) is another mechanism that can be used to facilitate grade transparency by enabling faculty to post grades online for students to view. Also known as a course management system (CMS), a LMS is a software application that assists faculty with teaching and administering classes and assists students with learning. LMSs provide various educational support tools such as communication, course document management and gradebook tools (Iftekhhar et al., 2019; Syed et al., 2021). Common LMSs include Blackboard Learn, Canvas and Moodle (Iftekhhar et al., 2019; Nguyen, 2021). Even though there is widespread use of LMSs among universities (Nguyen, 2021; Pereira & Wahi, 2017), many professors wait until the end of the semester to provide feedback about grades, and still other professors do not give any feedback until the final grades are posted (Yale College Council, 2018). Furthermore, LMSs vary by the tools available and quality of those tools (Syed et al., 2021). Not all LMSs currently offer the ability for students to perform a “what if analysis” to project grades, and some LMSs offer the feature but at a higher cost to the institution. Additionally, not all faculty members use the various features offered by an LMS (Pereira & Wahi, 2017; Rhode et al., 2017; Syed et al., 2021).

Rationale for the Grade Calculator

Based upon the authors’ experiences with student inquiries and expectations regarding final course grades, it seemed logical that providing students with a tool to easily estimate their final course grades would minimize the “shock factor” when students receive their final course grades, as well as reduce the number of inquiries and complaints at the end of a semester. Such a tool would likely benefit the students by enabling them to project their final course grades and verify the accuracy of their final course grades. Furthermore, the tool was expected to benefit the faculty by reducing grade inquiries and complaints. Additionally, the faculty members felt the Grade Calculator would enforce the concept that students need to work for their grades, and grades are not simply “given” out by the professors. The Grade Calculator was developed to address these issues.

The Grade Calculator

The Grade Calculator (Exhibit 1) is divided into four parts:

Part 1 of the Grade Calculator

This section (Exhibit 1, Part 1) of the Grade Calculator provides a complete example based on hypothetical grades showing an estimated final course letter grade. This part is not intended to be changed by the student and is simply used as an example to show the estimated course letter grade that would result from the information provided. The example used in Part 1 and 2 for this paper are based on the following course grading system for a hypothetical course syllabus:

	<u>Total Possible Points</u>
Three exams (each exam is graded on the scale of 0 to 100 points) are given during the semester, each exam is worth 25% towards the final grade.....	75.00
One term paper (graded on the scale of 0 to 100 points) is given during the semester and is worth 15% towards the final grade.....	15.00
Ten homework assignments (each homework is graded on the scale of 0 to 10 points) are given during the semester and are worth 10% towards the final grade	<u>10.00</u>
Total.....	<u>100.00</u>

The Grade Calculator should be modified to reflect the professor's course requirements as stated in the course syllabus. It should be noted that the professor is able to make any point system he or she likes and could insert a row for components, such as extra credit, special assignments, or participation and attendance. For example, if a professor gives up to ten points for extra credit assignments, a row titled "Extra Credit Assignments" could be included in the Excel spreadsheet, and students could insert their expected grade for this category. The individual categories can be changed, or the total could also go above 100 because the professor can set the grade range chart in Part 3 at any level.

Continuing the hypothetical example provided above, it is assumed that the student earns a:

- 72 on the first exam, a 74 on second exam, and a 75 on the third exam. Each exam grade is multiplied by 25%, which is added to the total points earned.
- 70 on the term paper. The grade on the term paper is multiplied by 15% with the result being added to the total.
- 90 points for homework. The grade on the homework is multiplied by 10% with the result being added to the total.

The final total course points for this hypothetical example amount to 74.75, which would generate a letter grade of C.

The main objectives of presenting and discussing the Grade Calculator with the students is to inform them of how the grades are calculated, thus enhancing transparency of the grading process, and to emphasize that the final grade is based upon what the students *earned* on the various exams and assignments. In other words, students are made aware that a grade is based upon the work they do and is not a grade "given" to them by the professor.

Part 2 of the Grade Calculator

This section (Exhibit 1, Part 2) is for students to insert their own actual or expected grade information into the shaded areas during the semester. This section starts out with an estimated letter grade of F, and the letter grade changes as actual numerical grades are entered into the Grade Calculator. As previously stated, a student can also use this section as a “what if” projection. At any point during the semester, students can insert their information and watch the estimated letter grade change from an F to hopefully an estimated higher letter grade. The Grade Calculator shows students what would eventually be the estimated final course letter grade if they continue their present performance. If the estimated course letter grade is not what the student desires, it will encourage the student to take measures, such as devoting more time to studying, to raise the final estimated course letter grade.

Part 3 of the Grade Calculator

This section (Exhibit 1, Part 3) provides the students with the grade scale the professor uses to calculate a final course letter grade. This part further enhances grade transparency to the students, letting them know what final average they need to achieve to earn their desired final letter grade. For example, based on the example grades given in Part 1, this section demonstrates to a student that a final course average ranging between 73 and 76 resulted in a C for the final course letter grade. At the end of the semester, after the final exam grade is posted, a student can easily determine how the final course letter grade was calculated. Part 3 can be altered by the professor to reflect whatever final average ranges the professor deems appropriate for a course letter grade.

Part 4 of the Grade Calculator

This final section (Exhibit 1, Part 4) of the Grade Calculator provides the VLOOKUP information necessary to convert the total number grade to the estimated final course letter grade. This part must be changed if the professor changes the ranges in Part 3.

	A	B	C	D	E
1	Exhibit 1				
2	COURSE LETTER GRADE CALCULATOR				
3	PART 1				
4	Example, assume the following:				
5		<u>Grade</u>			
6	Exam 1	72.00			
7	Exam 2	74.00			
8	Exam 3	75.00			
9	Term Paper	70.00			
10	Total Homework	90.00			
11					
12	The above grades were put into the worksheet as follows:				
13			Multiply	Total	
14	<u>Item</u>	<u>Grade</u>	<u>By</u>	<u>Points</u>	
15	Exam 1	72.00	25%	18.00	
16	Exam 2	74.00	25%	18.50	
17	Exam 3	75.00	25%	18.75	
18	Term Paper	70.00	15%	10.50	
19	Total Homework	90.00	10%	<u>9.00</u>	
20			Total	<u>74.75</u>	
21					
22	Estimated course letter grade (based on the Part 3 chart)			C	
23					
24	PART 2				
25	Insert your grades in column B.				
26	(the course letter grade will be computed automatically)				
27					
28			Multiply	Total	
29	<u>Item</u>	<u>Grade</u>	<u>By</u>	<u>Points</u>	
30	Exam 1	0.00	25%	0.00	
31	Exam 2	0.00	25%	0.00	
32	Exam 3	0.00	25%	0.00	
33	Term Paper	0.00	15%	0.00	
34	Total Homework	0.00	10%	<u>0.00</u>	
35			Total	<u>0.00</u>	
36					
37	Estimated course letter grade (based on the Part 3 chart)			F	
38					
39	Note: An F course letter grade initially appears				
40	because no numbers have been entered in Column B				
41					
42	PART 3				
43	Course Letter Grade Ranges Chart:				
44	A (4.0) 93 and above				
45	A- (3.7) 90,91,92				
46	B+ (3.3) 87,88,89				
47	B (3.0) 83,84,85,86				
48	B- (2.7) 80,81,82				
49	C+ (2.3) 77,78,79				
50	C (2.0) 73,74,75,76				
51	C- (1.7) 70,71,72				
52	D+ (1.3) 65,66,67,68,69				
53	D (1.0) 60,61,62,63,64				
54	F (0.0) 59 and below				
55					
56	Note: Number grades are not rounded up, for example,				
57	a total of 86.6 is a B not a B+				
58					
59	PART 4 VLOOKUP INFORMATION				
60	<u>Total</u>	<u>Grade</u>			
61	0	F			
62	60	D			
63	65	D+			
64	70	C-			
65	73	C			
66	77	C+			
67	80	B-			
68	83	B			
69	87	B+			
70	The Accounting Educators' Journal, 2023	A-			
71	93	A			
72					

The following link can be used to download a working Grade Calculator similar to the above example: https://docs.google.com/spreadsheets/d/1OMwfC6jzChBQ-wMf0vhKtys40V4UqUYe/edit?usp=share_link&ouid=117063543841629367343&rtpof=true&sd=true

Assessment of the Grade Calculator

A survey was performed to receive exploratory feedback from students who utilized the Grade Calculator. The survey examined the viewpoints of introductory accounting students regarding the usefulness of the Grade Calculator.

Participants and Procedures

The sample for this exploratory study consisted of undergraduate introductory financial accounting (financial) students and undergraduate introductory managerial (managerial) students. There were two different sections of the financial courses, made up of 39 and 25 students respectively, and one section of the managerial course, made up of 74 students. One of the authors was the professor for the financial sections, and another was the professor for the managerial course.

Beginning of the Semester

Prior to the first day of class, the authors posted the Grade Calculator on Blackboard, the University's learning management system. At the beginning of the semester, the students were informed that the purpose of the Grade Calculator was twofold: (1) to give guidance during the semester as to what students needed to do to earn their desired grades in the course and (2) to provide students with transparency in the grading process.

On the first day of class, the professors showed students how the Grade Calculator works by opening the Excel copy that was posted to Blackboard. Each professor entered hypothetical grades for exams, term paper, homework, etc. into the Grade Calculator to demonstrate how they go about using the calculator. Once all hypothetical grades were entered, a final course letter grade was calculated by the Grade Calculator and displayed. After the first example, the professors entered a different example, with a lower homework grade, showing students the positive impact of homework. Once again, a final course letter grade was calculated by the Grade Calculator and displayed.

After each exam during the semester, the students were once again shown the Grade Calculator and told how they could use it to estimate the course grade they will earn. The authors often likened the Grade Calculator to a scoreboard in a sports game. At the beginning of the semester, everyone has an F because the student has accomplished nothing. This fosters the realization that they must earn their grade. As they start adding points (exam grades, homework assignments, papers, etc.) to the scoreboard during the semester, they can watch the estimated course letter grade change.

A student does not need to be proficient in Excel to use the tool. All one needs to do is simply open the Excel spreadsheet (Course Letter Grade Calculator) and replace the zeros (highlighted in a shaded area) in Exhibit 1 (Part 2) with the grades they are earning. The final estimated course letter grade will change as students insert more numerical grade results. In addition, students can easily conduct a "what if analyses" of their grades. For example, after the second exam, students can enter all grades as of that point in time and enter estimated future grades to predict their final course letter grade.

Survey Methodology

To explore student reactions to the Grade Calculator, the authors created a survey to determine students' utilization and opinions of the Grade Calculator, as well as final grades in general. The survey consisted of 13 questions. The first two questions related to how often the students utilized the Grade Calculator. The next eight questions asked the students to indicate how much they agreed or disagreed with each statement regarding the ease and usefulness of the Grade Calculator, as well as objectivity and fairness of final grades. These questions were answered via a five-point Likert Scale. Following these, an open-ended question was asked for students to provide any thoughts or

comments on the Grade Calculator. Finally, some demographic data were collected, including the class standing and major of the students.

The survey was populated into Qualtrics and was administered to three introductory accounting courses (two Financial Accounting courses and one Managerial Accounting course) during the final class session of the semester. No incentives were offered to encourage the students to complete the survey. All professors who administered the survey provided students with the Grade Calculator at the beginning of the semester and demonstrated how to use it throughout the semester (particularly after each exam). Overall, 101 completed responses were collected. Table 1 presents the demographic information of the students. Most of the students ($n=73$; 72.3%) identified as non-accounting business majors while 19.8% ($n=20$) identified as accounting majors. A small number of the sample ($n=8$; 7.9%) were non-business majors. Most of the students were freshman ($n=37$; 36.6%) or sophomores ($n=42$; 41.6%). Juniors and seniors accounted for a little over 22% ($n=22$) of the sample. Results of the survey are presented in the next section.

Survey Findings

Summary statistics for utilization of the Grade Calculator are presented in Table 2. Panel A reports responses to the question "To what extent have you utilized the Course Grade Calculator?" More than half of the sample ($n=57$; 56.4%) reported using it "Quite a Bit" or "A Great Deal". About 20% ($n=21$) indicated using it "Somewhat" while a little over 22% ($n=23$) reported using it "Not At All" or "Very Little". To further assess utilization, the student respondents were also asked how many times they used the Grade Calculator during the semester. Panel B reports that about 10% of the sample ($n=10$) indicated they had never made use of it while 11.9% ($n=12$) used it once, 52.5% ($n=53$) used it 2-3 times while 25.7% ($n=26$) used it more than 3 times. These results indicate that most of the students are employing the Grade Calculator at least somewhat throughout the course.

Table 3 includes summary statistics for the Likert scale questions. Students were asked to what extent (on a five-point Likert Scale, with 1 representing strongly disagree and 5 representing strongly agree) they agreed with statements regarding final grades, grade objectivity, and level of ease and usefulness of the Grade Calculator. All the means for the questions were above 4.00 except for the statement "The course grade calculator is helping me earn the grade I want in my introductory accounting course", which had a mean of 3.891. Additionally, the means of all statements were significantly greater than the midpoint of 3 ($p=0.000$), indicating significantly positive responses to the Grade Calculator. These results indicate several implications of the Grade Calculator. First, the students felt that the instructors were clear in their grading policies, that students knew what they needed to do to earn their desired grade, and that the Grade Calculator was easy to use. Similarly, students also reported that their course letter grade would be determined fairly and agreed that course grades are earned by the student rather than assigned by the instructor. They also noted that they knew significantly better how their final grade would be calculated in their introductory accounting course compared to the other courses they were taking that semester and that having a Grade Calculator in every class would ease some stress surrounding final grades.

The open-ended question at the end of the survey asked students to provide any additional thoughts or comments on the Grade Calculator. The responses were overwhelmingly positive and one of the common themes around them was that students would like to have a Grade Calculator in all their classes. Some of these responses are below:

"I think that the course grade calculator is a really good implementation and is something I wish to see in all my future classes. It keeps me updated on where I need to be and how I am doing."

"I like the Course Grade Calculator. I have 0 clue what my grade is in some of my classes which is really annoying, but I know exactly what grade I have at all times. I think all professors should use this."

"I think the calculator is definitely something that needs to be integrated into more classes. It allows us to know what our grade is in the course at any moment as well as what grade we need to achieve in final exams at the end of the semester."

“I think it is a very useful tool that allows you to track your progress and success throughout the span of the course. Most of my teacher's don't even input our grades into blackboard until the end of the semester so it's impossible to know how well you are doing.”

Additionally, students indicated that the Grade Calculator helped to ease the stress and anxiety surrounding final grades:

“I really like the idea of the calculator. I have taken a few classes here where I was just unsure of my final grade. This made me feel better knowing I have the correct calculation of my grade.”

“Fantastic idea, in some of my other courses I have no idea what is going on behind my grades and the course grade calculator relieves some of that anxiety of the unknown by showing exactly how my final grade is broken down.”

Discussion

As noted earlier, the Grade Calculator is not intended to replace formal mid-semester grades, but instead to supplement the concept of grading feedback and responsibility. The authors introduce and explain the Grade Calculator on the first day of the semester and after each exam grade is posted. The authors explain that students must earn their grades and that they are not “given.” With this Grade Calculator, students can check their estimated final course letter grade not only at mid-semester, but also at any time during the semester. The Grade Calculator helps students understand what **they** must accomplish to **earn** their desired grade.

The authors set up their grade books using this Grade Calculator and simply transfer the final estimated letter grade at the end of the semester to the official grade report. The authors send their students an email at the end of the semester letting them know when their final letter grade for the course has been posted online. The authors also attach the Grade Calculator to the email and include a reminder that the Grade Calculator was used to determine the grade they earned in the course. By following this objective technique and letting the students know how the professor is calculating grades, there is very little argument on the student's part for the professor to change their grades. Anecdotally, the authors have found that the number of inquiries and complaints about grades have significantly decreased since using the Grade Calculator.

As discussed earlier in the paper, some LMSs can also be used to enable students to project final course letter grades. For example, Canvas offers faculty the ability to enable students to view their grades and project future grades (see <https://community.canvaslms.com/t5/Canvas-Basics-Guide/What-are-What-If-Grades/ta-p/25>). However, not all academic institutions currently use LMSs with grade projection tools, and not all faculty use all tools available (Pereira & Wahi, 2017; Rhode et al., 2017; Syed et al., 2021). Additionally, various universities with limited resources, such as those in developing countries, do not subscribe to professional LMSs such as Blackboard or Canvas because of lack of funding (Iftekhar et al., 2019). Also, the authors have anecdotally observed that not all students take advantage of the LMS, especially in introductory accounting classes required of various majors who are often freshman or sophomore students. The authors of this paper recommend the Grade Calculator for grade projection because it provides students with additional exposure to the advantages of using Excel. For instance, the Grade Calculator uses the VLOOKUP formula to convert a numerical score to a final letter grade. Since Excel is typically available on most computers and/or provided institutions to students at no additional cost, the Grade Calculator is especially useful for academic institutions that do not have an LMS that has a grade projection tool.

Limitations and Future Research

The assessment of the Grade Calculator was limited because all students were provided with the Grade Calculator and therefore there was no control group to compare results. Also, a small sample size was used, further limiting the ability to generalize the survey results.

Researchers are encouraged to compare the number of grade complaints, grade requests to change the final grade to a higher grade, and grade inquiries (for example, why did I only receive a B?) in a section of a course that used the Grade Calculator with a different section of the same course that did not use it. The authors would have done this, except they felt it would hinder student satisfaction (i.e., grade transparency), and did not want to disadvantage students by not using it and did not want to experience an increase in grade questions and complaints. Studies can be conducted to examine whether student perception and use of the Grade Calculator are related to personality traits. For instance, self-efficacy is an individual's belief that someone has the ability to obtain desired goals, and that belief impacts efforts to achieve certain goals (Bandura & Locke, 2003). It would be beneficial to study how an individual's self-efficacy impacts whether a student uses the Grade Calculator and whether or not a student believes the Grade Calculator is helpful. Since Zimmerman et al. (1992) found that perceived self-efficacy impacts the academic goals students establish for themselves, and influences their final course grades, it is possible that a relationship exists between a student's self-efficacy, use and perceived benefits of the Grade Calculator.

Additionally, studies can be conducted to determine if students' grade expectations are comparable to the actual final course grade and evaluate the number of grade inquiry emails from a class that used the Grade Calculator with a class that did not use the Grade Calculator.

Conclusion

The authors have found the Grade Calculator to be a very useful tool in keeping students informed of their progress throughout the semester. This Grade Calculator provides a digital tool to students who are accustomed to a digital environment and gives them the ability to easily conduct a sensitivity analysis to determine what **they** need to do to **earn** the grade they want. The authors find that the Grade Calculator helps to emphasize that students are responsible for their grades, and grades are not arbitrarily given out at the end of the semester.

The Grade Calculator presented in this paper is an optional tool for students. This instrument provides instructors with a simple, cost free, effective method of providing students with grade information in a timely manner. Thus, this helps students develop realistic grade expectations, emphasizes to students what they need to do to earn their desired grades, and minimizes any confusion at the end of the semester.

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Table 1. Respondent Demographics

	Full Sample	
	Number	%
Panel A: Respondent Major		
Accounting	20	19.8%
Business (Non-Accounting)	73	72.3%
Non-Business Major	8	7.9%
Total	101	100.0%
Panel B: Respondent Academic Class Standing		
First Year/Freshman	37	36.6%
Sophomore	42	41.6%
Junior	18	17.8%
Senior	4	4.0%
Total	101	100.0%

This table reflects the demographic information of survey respondents. Respondents could only select one category for the demographic information presented in Panels A and B.

Table 2. Course Letter Grade Calculator Utilization

	Full Sample	
Panel A	Number	%
Not At All	10	9.9%
Very Little	13	12.9%
Somewhat	21	20.8%
Quite a Bit	35	34.7%
A Great Deal	22	21.8%
Total	101	100.0%

Panel B	Number	%
0	10	9.9%
1	12	11.9%
2-3	53	52.5%
More than 3	26	25.7%
Total	101	100.0%

This table reports responses to questions about utilization of the Grade Calculator. Panel A reports responses to the question "To what extent have you utilized the Course Grade Calculator throughout this course?" Panel B reflects responses to the question "Approximately how many times have you used the Course Grade Calculator during the semester?"

Table 3: Summary Statistics by Question

#	Question	N	Mean	Median	Std. Dev.	p-value Sign Test
1	The professor is clear on his/her grading policies.	101	4.634	5.000	0.821	0.000
2	I know what I need to do to earn my desired grade in the course.	101	4.673	5.000	0.665	0.000
3	The course grade calculator is easy to use.	101	4.535	5.000	0.878	0.000
4	The course grade calculator is helping me earn the grade I want in my introductory accounting course.	101	3.891	4.000	1.165	0.000
5	Compared to other classes I am taking this semester, I have a better understanding of how I am performing in my introductory accounting course as a result of the course grade calculator.	101	4.416	5.000	0.983	0.000
6	Having a course grade calculator in all of my classes would ease my stress regarding final grades.	101	4.465	5.000	0.923	0.000
7	I believe that my grade in this course will be determined fairly.	101	4.535	5.000	0.923	0.000
8	Final course grades are earned by me rather than assigned to me by my professor.	101	4.535	5.000	0.878	0.000

This table reports the mean, median, and standard deviation of the Likert-scale survey questions. The following scales were used: 1= Strongly Disagree; 3 = Neither Agree nor Disagree; 5 = Strongly Agree. Two-sided sign tests were conducted on whether the mean response significantly differs from the neutral response of 3.00. Bold numbers indicate significance levels below 5 percent.