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Exploring the Contribution of Extra Credit in Marketing Education

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ABSTRACT

This study advances the literature on the incidence, attitudes and motivations to complete extra credit assignments. Behavioral feedback from 59 marketing instructors and 43 Principles of Marketing students aligned with reported incidence rates of offering and completing extra credit assignments, respectively. This was followed with open-ended questions about the appeal and benefits of extra credit assignments from a sample of 23 Principles of Marketing students. Content analysis supported by strong inter-rater validation revealed a two-dimensional construct of proactive/achievement orientation to earn more points toward a higher grade and a reactive/recovery orientation to extra credit. Discussion offers guidance on the use of extra credit assignments.

Keywords: Extra credit, student motivation, learning outcomes.

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Introduction

Marketing educators assign grades in a relative or absolute manner to identify student performance as exceeding, meeting, or falling below an academic standard (Dorsey, 2012) and as an indication of the student's mastery of a given subject (Airasian, 2000). Perceptions of academic grading covers a wide range, from the overly cynical "an inadequate report of an inaccurate judgment by a biased and variable judge of the extent to which a student has attained an undefined level of mastery of an unknown proportion of an indefinite material" (Dressel, 1983, p.12) to the altruistic "grading is an important means of communication with our students... a relatively unambiguous message about a student's progress, in a universally understood system of academic notation" (Jedrey, 1982, p. 104).

The above polar definitions become moot in light of studies relating student GPA to post-graduation performance. A meta-analysis (Cohen, 1984) of 108 studies correlating college GPA to various criteria of adult achievement (e.g., ratings of job performance, income, promotions, attainment of a graduate degree) reveals r =.18. A second meta-analysis (Samson et al., 1984) on 35 studies reporting the relationship between GPA and occupational performance (e.g., income, job satisfaction, effectiveness ratings) in various fields (e.g., teachers, engineers, business, nursing, medicine, military and civil service) concluded that "the overall variance accounted for makes grades or test scores nearly useless in predicting occupational effectiveness and satisfaction" (p.321). These findings suggest that offering extra credit to improve a student's grade is unlikely have any bearing on a student's professional success, so why bother?

There are perhaps only a handful of marketing educators who have *never* been approached by a student asking "is there something extra I can do?' This simple and often times frustrating question drives the motivation for this study based on the following. Studies examining extra credit are dated (mostly in psychology, from 1980 to 2006 focusing on how often instructors make extra credit assignments and the rate at which students pursue these extra credit opportunities). A lack of literature needs answers to help marketing educators know the popularity of extra credit and the use of extra credit assignments themes? Addressing our students, the questions include (a) what is the appeal and benefit for student participation in extra credit, and perhaps most importantly, (b) do marketing educators or our students articulate a learning component to extra credit?

In spite of the often polarized faculty reaction to extra credit; from the naysayers who might argue that industry does not offer extra credit, apart from bonus payments that are predicated on outstanding performance, to advocates who believe in ways to motivate student success by offering additional opportunities to enhance their course grade. These and other camps are based on strong beliefs that stray beyond the contribution of this study which is to advance the literature on extra credit by identifying marketing educator use of extra credit, types of extra credit assignments and whether select external factors contribute to extra credit. We also address students by comparing extra credit performance vis-à-vis the literature (online versus face to face, high versus low performing students, as a predictor of course grade) and tap students' underlying motivations toward extra credit. The benefit to the reader is to bring together the findings to offer guidance on the use of extra credit.

Literature and Hypotheses

Instructor likelihood to offer extra credit assignments. The educator's general attitude toward extra credit, rather than the circumstances of the individual case, largely determines whether it is offered (Norcross, Dooley & Stevenson, 1993). According to Norcross et al. (1993), 60% to 70% of responding college professors refused to offer extra credit, 20 to 30% occasionally offer extra credit, and 10% always provided extra credit opportunities. However, that same year Hill, Palladino, and Eison (1993) that report 82% of their sample of professors offer extra credit. Given this range of values, we propose the following middle-ground for marketing instructor's incidence rate for offering extra credit:

> *Hypothesis 1:* Fifty percent of marketing educators offer their students extra credit opportunities.

Student likelihood to complete extra credit assignments. Students with higher grades are more likely to complete extra credit assignments (Harrison, Meister & LeFevre, 2011), and students who are otherwise motivated to do well in the course appear more likely to take advantage of extra credit opportunities (Maurer, 2006). Several authors suggest that high-achieving students are more likely to complete extra credit activities compared to low-achieving students (Hardy, 2002; Padilla-Walker, 2006; Padilla-Walker et al., 2005; Silva & Gross, 2004). In line with this evidence, we propose:

> *Hypothesis 2:* High performing students will complete more extra credit assignments as compared to low performing students.

Influence of course modality. Ward (2004) discovered a significant difference between face-to-face median extra credit grade (68) and online median extra credit grade (28). The disparity suggests that online students simply have less time for extra credit work than face-to-face students. Thus, we propose:

> *Hypothesis 3:* Students in face-to-face classes will outperform online students when comparing performance levels on extra credit assignments.

Extra credit as a predictor of student performance. While extra credit in the form of daily online extra credit quizzes may not enhance student learning or retention (Maurer, 2006), it is suggested that participation may serve to motivate a deeper exploration of academic topics (Kelly, 2013, Norcross, Horrocks, & Stevenson, 1989). Similarly, extra credit performance is considered a strong predictor of exam performance, above and beyond gender, college grade point average, and ACT scores (Padilla-Walker, 2006). This predictive ability of extra credit activity supports the fourth hypothesis:

> *Hypothesis 4:* Extra credit scores predict exam performance.

Student perceived value of extra credit. Some students value extra credit assignments as a second chance to improve their grade and seem to endorse its routine offering (Norcross & Stevenson, 1989). Other students seek extra credit as an

opportunity to further improve their grade (Padilla-Walker, 2006). Consequently, we expect to find:

> *Hypothesis 5:* Students value extra credit for one of two reasons, with half seeking to make up for lost points and the other half seeking to improve their grade.

The following three research questions capture the study's contribution.

1. Using self-reports, what is marketing instructors incidence rate for extra credit, under what conditions is it offered, what are the expected benefits?
2. Using empirical evidence, what does extra credit performance predict?
3. Using self-reports, what benefits and motives drive students toward extra credit assignments?

Method

Participants. Data from a convenience sample of marketing educators (n=59) was collected at a marketing educator conference. Students (N=43) enrolled in two sections of a Principles of Marketing class (face-to-face n=20; online n=23) voluntarily completed a survey about extra credit. Students were predominately Caucasian (79%), equally divided between female (49%) and male (51%), median age of 28 years (M=27.3, SD=8.23). Each student's extra credit performance scores and exam performance scores were captured and matched for the empirical analysis portion of this study. By completing three extra credit assignments (differing by degree of difficulty), students could earn extra credit of up to 6% of their final grade in the course.

Procedure. At a marketing educator conference in the fall of 2014, faculty were verbally asked whether they use extra credit assignments in their courses, and a subsample were interviewed about related issues using the survey instrument presented in Appendix 1.

Students responded anonymously to an online survey (see Appendix 2) seeking their attitudes toward extra credit two weeks after the mid-point of the course. One copy of the survey (entitled 'survey') was emailed to high performing students (course grade of B or better) and an identical version (entitled 'instrument') was emailed to low performing students (course grade less than a B). Content coding of qualitative data proceeded using the standard approach developed by Miles and Huberman (1994) in which themes within the data are coded, categorized and interpreted. Preliminary codes were deductively constructed from existing theory, e.g., need versus opportunity recognition (Bruner II & Pomazal, 1988), compensating for points lost (Norcross & Stevenson, 1989), and striving for gains (Padilla-Walker, 2006). Additional codes were added inductively as new themes emerged in the data (e.g., proactive versus reactive focus, intrinsic versus extrinsic value). Final categories and counts are presented in the results section.

Students were invited to complete up to three extra credit assignments (ECs) in alignment with Palladino et al. (1999) seven pedagogical guidelines for the use of extra credit, reflecting three levels of learning difficulty as follows. EC#1 (worth up to 1% added to the student's final course grade) is based on material covered in the syllabus, EC#2 (worth up to 2% added to the student's final course grade) covers material not covered in the syllabus but available in their required textbook, or EC#3 (worth up to 3% added to the student's final course grade) covers material outside the scope of the syllabus and class content. Multiple choice questions were used for EC#1 and EC#2 given their equivalence to short-answer questions (Bacon, 2003) when assessing Bloom's taxonomy learning outcomes of 'evaluate' and 'create' (Anderson &

Krathwohl, 2001). In contrast, EC#3 contained two computational and short-answer questions on the topic of cross-price elasticity of demand. Overall, each of the tests were relatively homogeneous (topic specific), thought provoking (versus fact-based requiring memorization) with a consistent level of difficulty and limited time to complete best described as partially speeded power tests emphasizing accuracy of the supplied answers (Boyle, 1984; Rindler, 1979).

Results

What is the level of extra credit use by marketing educators, conditions and expected benefits? Marketing educators offer extra credit 64% of the time. This incidence rate is not significantly different to the average 50% reported in the literature ($P \leq .50$, n=59, Y=38), the exact binomial (one-tailed) p=.04 thus Hypothesis 1 is supported. Establishing the representativeness of the sample led to exploratory analysis of institutional effects, instructor usage criteria and rationale for providing extra credit opportunities (see Appendix 1 for interview items). Feedback from a sub-group of marketing educators (n=26) suggests offering extra credit is not influenced by state versus private college employment (χ^2 (1, N=26) =.15, p=.52), with or without AACSB accreditation (χ^2 (1, N=26) =.49, p=.39) or instructor gender (51% male, 49% female) (χ^2 (1, N=59) =8.33, p=.42).

From the subgroup of 26 marketing educators, of the 17 offering extra credit, six (35%) do so to help students attain a higher grade, while eight (47%) do so to help students make up for lost points (P =.5, n=14, Y=8), the exact binomial (one-tailed) p=.79. The majority of 15 (88%) marketing educators offer extra credit limited to the materials and resources used within the regular course content, (P =.5, n=17, 15), the exact binomial (one-tailed) p<.01. These results suggest that marketing educators are evenly divided in their rationale for offering extra credit, as roughly half do so to help students attain a higher grade overall (e.g., “the icing on the cake”) and the other half do so to help students recover from points lost along the way (e.g., “the cake itself”).

Assignments tend to reinforce material that is part of the regular course syllabus, but take many forms such as attend an event (33%), quizzes (33%), essay (22%), project (22%) research papers (17%), class participation (11%), and game in class (11%). The majority (89%) do not place any constraints on access to extra credit (e.g., time constraint, minimum GPA, minimum grade in course, or other qualifiers). Extra credit as a student learning tool was not mentioned by any instructors interviewed.

What does extra credit performance predict? Thirteen face to face class students (65% response rate) and 14 online students (61% response rate) elected to take the extra credit assignments. Students were offered a 48-hour time window to complete the assignments, with 23 students (85%) starting the assignments in the final four hours. No student scored above 75% for any of the assignments, and of the 14 students attempting the third assignment, 5 students (36%) elected not to complete this assignment upon opening the assignment.

We first test whether academically higher performing students are more likely to complete extra credit assignments. The chi-square test χ^2(1, N=27)=3.76, p=.16 with Yates’ Continuity of Correction applied, suggests no significant difference between academic standing in the class (high versus low) and academic standing taking the extra credit assignments, thus failing to support Hypothesis 2. There were statistically significant differences between face-to-face and online student performance on each of three increasingly difficult three extra credit assignments (EC1, EC2 and EC3) as determined by an analysis of variance for EC1, F(1,25)=4.85, p=.037, η^2=.16, and

EC2, $F(1,25)=7.52$, $p=.011$, $\eta^2=.23$, but not for EC3, $F(1,12)=.08$, $p=.788$. In all cases online students outperformed their face-to-face colleagues for EC1 ($M=60\%$, $SD=.15$ versus $M=46.2\%$, $SD=.18$) EC2 ($M=53.9\%$, $SD=.14$ versus $M=36.5\%$, $SD=.19$) and EC3 ($M=22.5\%$, $SD=.26$ versus $M=18.3\%$, $SD=.27$. These results fail to support Hypothesis 3. Furthermore, the increasing difficulty of the extra credit assignments is reflected in the student average grades (in most cases failing) and declining participants (from 27 students for EC1 to 9 for EC3) suggests that there is a student trade-off and declining interest as extra credit difficulty increases, perhaps pointing to a superficial gain versus an interest in deeper learning.

There was a significant correlation between average exam grade and extra credit grade $r=.399$, $n=27$, $p=.04$. A simple linear regression analysis revealed that the independent variable extra credit score was a significant predictor of the dependent variable average exam score ($\beta=.39$, $p=.04$), accounting for over a sixth ($R^2=15.9\%$) of the variance in average exam score. The regression model significantly predicts average exam score ($F(1,25)=4.73$, $p=.04$) such that average exam grade = 73.95 + .23(extra credit grade), results that support Hypothesis 4. Interestingly, there was no significant relationship between students' extra credit score and their average course score ($\beta=-.02$, $p=.91$, $F(1,25)=.014$, $p=.91$), presumably because the course grade included activities outside multiple-choice and short-answer assessments such as class presentations and a simulation.

What drives students toward extra credit assignments? A qualitative unaided response approach was used to determine if students view extra credit opportunities as a method to attain a higher grade than they would have earned otherwise (e.g., the icing on the cake) or to make up for lost points on regular course content (e.g., the cake itself). Intra-class correlation analysis was run to determine if there was agreement between two marketing educators' judgment on categorizing the student responses to the open-ended questions. There was strong agreement between the two educators' judgments, $r=.916$, (95% CI, .833 to .955), $p < .000$.

Table 1 ($n=23$) reports a content analysis of responses to the question "What do you like about extra credit?" In aggregate, the most frequently cited appeal of extra credit is reactive in nature, geared toward recovery or making up for lost points (52%). The second most cited appeal of extra credit is proactive in nature, geared toward achievement or earning more points toward a higher grade (38%). These two categories combined reflect a heavily extrinsic orientation toward extra credit (90%). The remaining comments reflect an intrinsic appeal of extra credit, e.g., "to learn more" (10%). Examination of high versus low performing students reveals stronger reactive/recovery orientation (60%) than proactive/achievement orientation (33%) among high performing students. In contrast, low performing students are balanced in the appeal of reactive/recovery (43%) and proactive/achievement (43%) sentiments. The small incidence of the intrinsic appeal "to learn more" was shared between high and low performers (7% and 14% respectively).

Table 1:
Why students like extra credit assignments by academically high and low performers

Theme	Count (%)
All Participants (n=23)	
To make up for lost points when needed	12 (52%)
To attain a higher grade	11 (48%)
To learn more	3 (13%)
High Performers(n=12)	
To make up for lost points when needed	7 (58%)
• But not usually needed	2 (17%)
To attain a higher grade	5 (42%)
To learn more	1 (8%)
Low Performers (n=11)	
To attain a higher grade	6 (54%)
To make up for lost points when needed	5 (45%)
• But not usually needed	1 (9%)
To learn more	2 (18%)

Table 2 (n=22) reports a content analysis of responses to the question "Why do you complete extra credit assignments?" The findings are reversed compared to the previous question, such that the perceived benefit of completing extra credit is heavily proactive in nature, geared toward achievement or earning more points toward a higher grade (62%). The second most cited benefit of extra credit is reactive in nature, geared toward recovery or making up for lost points (28%). A small percentage of comments pertain to an impression management, e.g., "it shows the professor that I care" (10%). Closer examination of the coded data reveals little difference by performance level. Both groups lean toward a proactive/achievement orientation to earn more points toward a higher grade (high 63%, low 62%) as opposed to a reactive/recovery orientation of making up for lost points (high 31%, low 23%). The small incidence of impression management was shared between high and low performers (6% and 15% respectively).

Table 2:
Why students complete extra credit assignments

Theme	Count (%)
All Participants (n=22)	
To attain a higher grade	17 (77%)
To make up for lost points	8 (36%)
Shows the professor I care	3 (14%)
High Performers(n=12)	
To attain a higher grade	7 (58%)
• Can't hurt to have more points	3 (24%)
To make up for lost points	1 (8%)
• But usually not needed	4 (33%)
Shows the professor I care	1 (8%)
Low Performers (n=10)	
To attain a higher grade	6 (60%)
• Can't hurt to have more points	1 (10%)
• If I have enough time	1 (10%)
To make up for lost points when needed	1 (10%)
• But usually not needed	2 (20%)
Shows the professor I care	2 (20%)

From a qualitative perspective, Hypothesis 5 is supported given that students view extra credit as a means for both gaining additional points and making up for lost points. That is, the appeal of extra credit is reactive/recovery in nature, to make up for past errors (i.e. repair the cake) whilst the perceived benefit of extra credit is proactive/achievement whereby extra credit is valued most for achieving a higher grade (i.e., add more icing). At the student academic performance level, higher performing students report a tendency to be affectively reactive/recovery-oriented and rationally proactive/achievement-oriented, whilst low performing students are relatively less reactive/recovery-oriented.

Discussion

The majority of marketing educators (64%) offer some form of extra credit, but there is little consistency on type of extra credit assignment or rationale for offering it. Types of assignments range from short easily graded quizzes to more extensive research papers or projects, a positive finding that suggests many educators are willing to invest valuable time and effort in developing supplemental student work. Reasons for offering extra credit are varied, but centered on grade recovery or grade enhancement, but not student learning. It would therefore seem that similar to other disciplines, marketing educators view extra credit to enhance students' grade, and by implication, contribute to a higher SETs (Student Evaluation of Teaching) versus a tool to enhance student learning.

In stark contrast with prior studies suggesting high academic performing students are more likely to complete extra credit assignments (Harrison, Meister & LeFevre, 2011; Maurer, 2006; Silva and Gross, 2004), there was no such significant result in this study. High and low performing students in the course were equally likely to complete extra credit, as were face-to-face and online students.

While incidence rates were consistent across subgroups, significant EC performance differences were found when comparing face-to-face versus online students, as well as when comparing high versus low performing students. Contrary to the literature (Ward, 2004), online students out performed face to face students, though it is worth noting that the face to face students in this study are commuter students that may have more time pressure and overscheduling stress as compared with their online peers.

Unsurprisingly, the results reveal significantly higher EC performance for high versus low performing students. Furthermore, extra credit performance was found to correlate with average exam performance, but not with average course grade. This may be based on the fact that the extra credit assignments were similar to the Exams used in the course, whilst the course itself included assignments beyond multiple choice questions (e.g., mini-case analysis, in-class presentations, etc).

When asked about the appeal and benefits of extra credit, nearly all students provided the same rationale as their educators, i.e., replacing points lost due to past mistakes ("the cake") or earning more points to achieve a higher grade ("the icing"). Both categories of reasons pertain to impact on one's grades, an extrinsic outcome, rather than the possibility of increasing knowledge or skills in the discipline, an intrinsic outcome. One explanation for this extrinsic bias is that students may simply lack an interest in the deeper learning that extra credit participation might afford them, that business is based on results, or a business school culture that rewards extrinsic achievements. A competing explanation is that the assignments themselves are filtering out the students who might have an intrinsic orientation to the opportunity. Students who are doing well in a course may not need extra points toward a target grade nor make up for lost points, and thus would not choose to participate in an extra credit assignment if this is all that extra credit is perceived to offer. These high performing students may be interested in pursuing extra credit for non-grade related intrinsically rewarding outcomes, however the assignment must be perceived to support this outcome to successfully capture their interest. The participants of this study did not express this type of motivation for pursuing EC, possibly because the EC offerings did not inspire students with this type of orientation to participate, or because intrinsically rewarding outcomes were not possible given the nature of the EC offerings. Similar participation rates between high and low performing students, as opposed to the hypothesized higher incidence rates among high performing students, could be due to intrinsically-oriented high performers opting out.

Conclusions

Implications for Marketing Educators. The notion of using extra credit assignments to fulfill deeper learning objectives does not seem to be top-of-mind for most educators or students. If the marketing educator's motivation to offer extra credit is to further learning, the challenge worthy of further study to design an environment where students will perceive extra credit as a worthwhile learning experience, and to construct methodology to assure the extra credit assignment/s is an effective tool for deeper learning. This study's results may offer some guidance such that higher performing students with little need for extra credit though candidates for deeper learning are motivated by both reactive/recovery and proactive/achievement motivations. However, for the low performing students where

deeper learning may be most beneficial, the trigger for time and effort toward deeper learning via extra credit should be proactive/achievement oriented. The goal of deeper learning is a major challenge given the increasing difficulty of the extra credit assignments resulted in a drop in student average extra credit grades (in most cases failing) and declining participants (from 27 students for EC1 to 9 for EC3) suggesting there may be a student trade-off with declining interest as extra credit difficulty increases, confirming the finding that extra credit is favored more as additional grade points versus deeper leaning. Though not tested, perhaps presenting extra credit assignments as very challenging, students may opt to focus on the course work itself.

The statistically significant relationship between EC assignment and course exam scores offers the instructor the use of extra credit assignments to predict course exam grades (assuming the EC and exam format are identical). The benefit of EC would serve as a diagnostic test to alert the instructor whether the student needs additional assistance to excel in the course exams. Given EC assignments do not penalize the student, this becomes a 'free' test to establish whether the student is on course or not.

Finally, and based primarily on anecdotal evidence, a practical response to a marketing educator's question "should I consider extra credit for my students" is best answered in the context of their colleagues' behavior. If all the marketing faculty use extra credit, then buy-in, otherwise you may be perceived as an outlier, and not a team player. If none of your colleagues use extra credit, then avoid it, otherwise you may be perceived as a weak, capitulating to frivolous student demands. If the picture is mixed, then the use of extra credit could be presented as a learning tool, with a fixed maximum contribution to a student's final grade and clearly stated in the syllabus (versus ad hoc applications). In any event, it is probably wise to discuss the issue with your colleagues before making a decision on the availability and goal of extra credit.

References

Airasian, P. W. (2000). *Assessment in the classroom: A concise approach*. 2nd ed. Boston: McGraw-Hill.

Anderson, L.W. and Krathwohl, D.R., eds. (2001). *A taxonomy for learning, teaching, and assessing. A review of Bloom's taxonomy of educational objectives*. New York: Addison Wesley Longman.

Bacon, D.R. (2003). Assessing Learning Outcomes: A Comparison of Multiple-Choice and Short-Answer Questions in a Marketing Context. *Journal of Marketing Education*, April 25: 31-36,

Boyle, S. (1984). The effect of variations in answer-sheet format on aptitude test performance. *Journal of Occupational Psychology*, 57(4), 323.

Bruner, II, G. & Pomazal, R.J. (1988). Problem Recognition: The Crucial First Stage of the Consumer Decision Process. *Journal of Consumer Marketing*, 5(1), 53– 63.

Cohen, P. A. (1984). College grades and adult achievement: A research synthesis. *Research in Higher Education*, 20(3), 281-293.

Dorsey, M. (2012). *A Different Way to Evaluate Achievement: Six Colleges without Grades*. College ansewers.com. Retrieved from http://college.answers.com/college-profiles/a-different-way-to-evaluate-achievement-six-colleges-without-grades

Dressel, P. (1983). Grades: One more tilt at the windmill. In A. W. Chickering (Ed.), *Bulletin*. Memphis: Memphis State University, Center for the Study of Higher Education.

Hardy, M. (2002). Extra credit: Gifts for the gifted? *Teaching of Psychology*, 29(3), 233-234.

Harrison, M. A., Meister, D. G, & LeFevre, A. J. (2011) Which Students Complete Extra-Credit Work? *College Student Journal*, 45(3), 550-555.

Hill, G. W., IV, Palladino, J. J., & Eison, J. A. (1993). Blood, sweat, and trivia: Faculty ratings of extra-credit opportunities. *Teaching of Psychology*, 20, 209–213.

Jedrey, C. M. (1982). Grading and evaluation. In M. M. Gullette (Ed.), *The art and craft of teaching*, Cambridge, MA: Harvard-Danforth Center for Teaching and Learning.

Kelly, M. (2013). Extra Credit—Dos and don'ts with extra credit. About.com. Retrieved from http://712educators.about.com/od/gradingsystems/a/extra_credit.htm.

Maurer, T. W. (2006). Daily online extra credit quizzes and exam performance. Journal of *Teaching in Marriage and Family*, Volume 6, 2006

Miles, M. B. & Huberman, A.M. (1994). *Qualitative Data Analysis (2nd ed.).* Thousand Oaks, CA.: Sage.

Norcross, J.C., Dooley, H.S. & Stevenson, J.F. (1993). Faculty Use and Justification of Extra Credit: No Middle Ground? *Teaching of Psychology*, December, 20: 240-242

Norcross, J., Horrocks, L. & Stevenson, J. (1989). Of barfights and gadflies: Attitudes and practices concerning extra credit in college courses. *Teaching of Psychology*, 16(4), 199-203.

Padilla-Walker, L.M. (2006). The Impact of Daily Extra Credit Quizzes on Exam Performance. *Teaching of Psychology*, 33: 236-239.

Padilla-Walker, L., Zamboanga, B., Thompson, R., & Schmersal, L. (2005). Extra credit as incentive for voluntary research participation. *Teaching of Psychology* 32(3), 150-153.

Palladino, J. J., Hill, G. W. IV., & Norcross, J. C. (1999). Using extra credit. In B. Perlman, L. I. McCann, & S. H. McFadden (Eds.), *Lessons learned: Practical advice for the teaching of psychology* (57-60). Washington, D.C.: American Psychological Society.

Rindler, S.E. (1979). Pitfalls in Assessing Test Speededness. *Journal of Educational Measurement*, 16(4), 261-270

Samson, G., Grave, M., Weinstein, T., and Walberg, H. (1984). Academic and occupational performance: A quantitative analysis. *American Educational Research Journal*, 21(2), 311-321.

Silva, F.J., & Gross, T.F. (2004). The rich get richer: Students' discounting of hypothetical delayed rewards and real effortful extra credit. *Psychonomic Bulletin and Review*, 11 (6), 1124-1128.

Ward, B. (2004). The Best of Both Worlds: A Hybrid Statistics Course. *Journal of Statistics Education*, 12(3), retrieved from http://www.amstat.org/publications/JSE/v12n3/ward.html.

Appendix 1:

Instrument used to interview marketing educators

1. Do you offer extra credit (EC) to your undergraduate students?
2. Which statement do you agree with most?
   a) Extra credit is for students who want to gain additional points, in other words, the icing on the cake.
   b) Extra credit is for students who need to make up for lost points, in other words, the cake itself.
3. Does the student need to use materials or resources beyond your regular course content to complete the EC?
4. How would you classify the kinds of extra credit do you offer?
5. Do you limit in any way access to extra credit opportunities? (GPA, time limit, etc).

Appendix 2:

Instrument used to capture student incidence rate, appeal and perceived benefit of completing extra credit assignments.

1. I like being offered Extra Credit assignments (5-point scale from strongly agree to strongly disagree)
2. Why? (short answer question)
3. How often do you complete Extra Credit assignments that are offered to you? (5-point scale from always, over 80% of the time, between 20% to 80% of the time, less than 30% of the time, and never).
4. Why? (short answer question)
5. What percentage of all the college courses you have taken include one or more Extra Credit assignments per course? (actual percentage).