

The Use of an Incentive Program to Increase Motivation for Academic Performance

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The effects of an incentive program on academic performance were examined. Sixty student-athletes on academic probation at a Division I university participated. Points were awarded for positive, measurable efforts towards improving academic standing. Although grade point average (GPA) did not significantly increase from one year to the next, 62% of student-athletes did demonstrate improvement on this measure. Total points earned by each individual was not significantly correlated to GPA, however, class year was significantly negatively correlated with points earned, suggesting that this type of intervention may be more effective with younger student-athletes.

The importance of providing academic support for intercollegiate athletes is well acknowledged (Lang, Dunham, & Alpert, 1988; Walter & Smith, 1986; Zingg, 1982). An informal survey of NCAA Division I athletic programs conducted in conjunction with the present study indicated that many universities require freshmen, transfers, and those on academic probation to attend some form of academic improvement program. Maloney and McCormick (1993) found that athletes often have weaker academic credentials—which are the most important determinants of lower grades—than nonathlete students entering the university. On average, they found that student-athletes' high school rank is about 19 percentage points lower, and their SAT scores average about 150 points lower than the rest of the student body. In addition, 42% of student-athletes fail to maintain the 2.0 GPA required to graduate from their university.

In an attempt to better understand the factors related to the academic success of collegiate football players, several risk factors for academic failure were identified (Lang et al., 1988). Among them were low high school GPA; failing a year in school; low socioeconomic status (determined by type of high school education and mother's level of education); being disciplined frequently by their high school coach; and feeling like they were "majoring in eligibility" (i.e., viewing their education as primarily a means by which they are allowed to compete in athletics). In addition, Brackney and Karabenick (1995) found that students who were on academic probation were less likely to effectively regulate their study environment, persist in the face of difficulty or distraction, and seek academic assistance from others when necessary.

These characteristics describe the type of students who most frequently attend

academic improvement programs. It has been demonstrated that students' efforts to regulate and manage their time and study environment correlate positively with grades in undergraduate classes (Pintrich & Garcia, 1991). Instilling study habits, such as managing time and controlling the study environment, is a primary goal of academic support programs.

Academic performance is often not a high priority for student-athletes (Berkow, 1992; Moran, 1993). The value of engaging in academic tasks is assumed to depend on intrinsic interest (e.g., satisfaction of performing well or interest in the subject matter), extrinsic sources (e.g., grades or approval), and the perceived utility of reaching subsequent academic goals (e.g., fulfilling graduation requirements; Weiner, 1985). Intrinsic interest is frequently at a low level for freshman student-athletes entering the college environment. If they have not been academically successful or had positive learning experiences, they will tend not to see the importance of succeeding academically, nor are they likely to recognize the relationship between academic success and potential future goals such as graduate school or professional careers (Kaufman & Creamer, 1991).

For student-athletes whose intrinsic motivation is low, it may be necessary to focus on extrinsic motivation techniques, such as arranging the environment to increase the probable occurrence of positive consequences related to the desirable behavior. Although improvement programs contribute to the academic success of college student-athletes, a negative stigma is often attached to study hall (i.e., mandatory study sessions) and students sometimes do not take advantage of support services offered to them (Berkow, 1992; Walter & Smith, 1986). Typically, the consequence for a student-athlete not attending study hall is the delivery of some form of punishment. Additional running, calisthenics, and early morning study sessions are often used as consequences for misbehavior and may contribute to student-athletes believing that engaging in academic pursuits is a painful and negative experience. These forms of punishment do not teach desirable study behaviors and their long-term effects are unknown.

Conversely, the use of positive reinforcement, including token economies, has been shown to be effective in changing behavior in diverse settings (Stipek, 1993). Using motivational techniques in the form of a game has also been shown to be effective for learning, as this includes a form of competition which is attractive to students with a high need for achievement (Klein & Freitag, 1991). The incentive program in the present study, coined the "Free Hours Point Program," was designed to increase the focus on positive, constructive behaviors and reward the student-athletes for making an effort to improve their academic performance. The program was administered in a manner that allowed students to "score" points—similar to a game—something with which they were already familiar. The program utilized positive reinforcement (in the form of points) for students going above and beyond the minimum requirements set by the athletics department, such as spending extra time reading, taking notes, coming to a tutorial session with questions and meeting with an academic advisor.

Most often students need more time and support for their academic responsibilities than the minimum that the department requires. Academic improvement programs are designed as a supplement to other behaviors, not as the sole means

of academic success. If students are rewarded for exceeding the minimum requirement, it is more likely they will learn the appropriate behaviors to assist them with becoming successful, and incorporate them into their repertoire of academic behaviors.

It has been consistently demonstrated that for reinforcement to be effective, it must be easily administered and valuable to the participant (Stipek, 1993). Two things which are often very important to student-athletes are playing time and personal time. Academic counselors and support personnel need the cooperation of coaches to influence playing time and sometimes this is not possible to implement. However, counselors do often determine which student-athletes are required to attend study hall and what their hourly commitment will be in the program. The demands of intercollegiate athletics participation (e.g., classes, practice, meetings, weights, and study hall) leave little personal time for student-athletes. Time away from study hall was selected as a reward that could be regulated by the academic counselor. Students were allowed to take several hours away from academic improvement if they accumulated enough points by performing the desirable behaviors previously mentioned. These hours were chosen by the student-athlete and they had to be taken off during the semester in which the points were earned.

Method

Participants

Sixty student-athletes, members of the football team at a Division I-A institution and participants in the Academic Improvement (AI) program, participated in the study. Participants were evenly distributed across academic class: 25% freshman, 23% sophomores, 23% juniors, and 28% seniors. Student-athletes with a cumulative grade point average (GPA) of less than a 2.25 were required to participate in the AI program. Students with less than a 2.00 GPA were required to attend the program for 8 hours per week (71% of the sample) and those with between a 2.00 and 2.25 were required to attend 4 hours per week (29% of the sample). The time requirement was fulfilled in a variety of ways including meeting with tutors and mentors, attending computer lab hours and participating in quiet reading/studying hours. Participation in the Free Hours Point Program was voluntary by all attendees, however all student-athletes participated.

Incentive System

Students were encouraged to take part in the Free Hours Point Program during an introductory meeting for the AI program. They were given a handout describing the variety of ways they could earn points. These included spending extra time in AI with tutors; reading or working on the computer; attaining an A or B grade on a midterm exam, class assignment or grade check; or achieving at least 80% on the written evaluations that the tutors and mentors were asked to complete. Written evaluations included the rating of behaviors and qualities such as being on time to a session, being prepared, taking comprehensive class notes, and mastering course material. Each method of earning points had a predetermined value (e.g., 80% on a tutor evaluation was worth one point, 90% was worth three points,

and 100% was worth five points).

Points were tallied and distributed weekly. The points were signified with color-coded dots that were placed on index cards. Red represented five points; blue, three points; and green, one point. Each card also contained the following information: student's name, how points were earned (e.g., Psych 101 tutor evaluation), date points were earned, and the initials of the academic counselor. Students were told that they were responsible for the dots and the academic counselor was not keeping records of the points; lost points would not be replaced. They were also told if they were caught forging or transferring points, they would lose all point privileges.

If students earned 35 points, they were allowed to exchange them for one hour of mandatory study hall time, and if they earned 50 points they were allowed to exchange them for two hours. This was done to encourage students to continue earning points. Students were also encouraged to exchange points for their mentor sessions or reading hours rather than tutoring sessions, however, they were allowed to use the points as they deemed necessary. The only requirement was that they must give the points to the academic counselor prior to the time they were going to miss, up five minutes before the session began. Points could not be exchanged to clear up an unexcused absence after it occurred.

Data Analysis

Students' GPAs for the previous the fall semester, when the point program was not in use, were compared to the fall semester when the system was implemented. Correlations were examined among total points earned, GPA, and year in school.

Results

A one-way ANOVA did not indicate a significant difference between semesters with and without the point system in place, $F(1,35) = 3.33, p = .07$, although there was a moderate trend toward higher grades during the semester when the system was in place. Sixty-two percent of the student-athletes improved their GPA. A Pearson product-moment correlation indicated that the correlation between total points earned and GPA was not significant ($r = .156, p = .262$). Year in school and total points earned by individuals were significantly negatively correlated ($r = -.6164, p = .000$), with the youngest students earning the highest number of points (See Table 1).

TABLE 1
Mean Points Earned by Academic Year

Year in School	<i>n</i>	<i>M</i>	<i>SD</i>
1	15	80.73	38.19
2	14	40.53	26.90
3	14	25.92	17.67
4	17	22.58	13.13

Discussion

Although GPA improved from the first to second fall semesters, it was not related to the frequency of study points earned in the Free Hours Program. There are many factors that can contribute to an increase in GPA, such as life events, stress, coaching influence, being in competition, and course load and selection. The factor of in-season versus out-of-season was controlled in this particular study, but there seem to be other influential factors that are more powerful than the use of incentive programs.

On a subjective note, the students seemed to enjoy receiving the points. They looked forward to receiving them each week, and expressed frustration if they did not. To ensure that the students understood what was expected of them, tutors and mentors were encouraged to discuss their evaluations with student-athletes prior to them turning them in to the counselor so the student would not be surprised when or if they did not earn points. The statistical results seem to indicate that this kind of program is more likely to be more effective with younger student-athletes, such as freshmen or sophomores. These are often the students targeted by an academic counselor since they are at the highest risk, and in need of establishing good study habits from the beginning of their academic careers.

The Free Hours Point Program is cost-efficient in terms of time and materials, and it can easily be implemented. The most time-consuming portion of the study was keeping track of the number of points earned and spent. In general, it was a very basic program that can be tailored to almost any student population. The average number of days that the athletes actually cashed out was one (two hours). This is positive in the sense that points were not easily earned and the athletes did not miss a significant amount of time scheduled in the AI program, yet they were still rewarded and given the feeling they could exert some form of control over their personal time. It will be important to explore ways of encouraging more students to earn a higher number of points. Posting the points, for example, might create a more competitive situation where student-athletes strive to outdo one another. Awards for such categories as "most points earned" by each academic class (freshman, sophomore, etc.), and by each team could be given at the end of the semester.

One major limitation of this study was the lack of a control group. Comparisons should be made between students who were on probation and did not utilize the point program and those who did participate. Since this sample was limited to football players, student-athletes from other sports also need to be examined before more definitive conclusions can be drawn. It would also be beneficial to examine the effects over an entire year, including both in- and out-of-season. A study done by Maloney and McCormick (1993) found that football players and others in revenue sports received, on average, a letter grade lower than nonathletes in approximately half of their courses during the semester of participation.

Lastly, alternative incentives need to be evaluated. The lack of a significant relationship between total points earned and GPA suggests that the reinforcer might not have been strong enough. It is possible that time away from study hall is not sufficiently motivating for student-athletes. As with any token economy or rein-

forcement program, the reinforcers must be valued by the participant in order to foster motivation (Stipek, 1993). It might be valuable to survey the population prior to implementation to find out what they feel would motivate them. One limitation that must be considered is the restrictions placed on the institutions by the NCAA. What would typically be very powerful reinforcers for athletes such as money, food, and clothes are prohibited by the rules that are in place. Finding reinforcers that are both effective and legal makes the job of motivating student-athletes with relation to academic performance more challenging.

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