This study was designed to investigate the extent to which grade inflation has existed at Brigham Young University (BYU) after accounting for increased preparation levels of entering students over time. Analyses were conducted for the university at large and individual colleges. The study first developed a model to forecast student grade point average (GPA) from preparation factors and from a time series analysis to establish formulas for forecasting levels of grade inflation; and, second, administered a questionnaire to analyze grading attitudes of faculty (N=406) who had been at BYU more than 20 years. The average American College Testing (ACT) score of BYU entering freshmen has gone from the 70th percentile nationally in 1975, to the 90th percentile nationally in 1994. The lower third of the student body that existed 20 years ago has all but disappeared. Given the make up of the student body (older than average, generally more religious, etc.) and with the improved pre-enrollment preparation levels, the study concluded that it does not appear that grade inflation is an overall problem at BYU. There has been, however, some rise in GPAs. Disparities were found across colleges within the university with colleges which base grading on fixed standards awarding higher grades than colleges which base grading on a curve. Grade inflation was also found more common whole school in the Spring/Summer semester than in the Fall/Winter term. Disagreement among faculty about grading policy was found. (Contains 14 references.) (Author/DM)
Grade Inflation: Reality or Myth?
Student Preparation Level vs. Grades at Brigham Young University 1975-1994

The Association for Institutional Research
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Orlando, Florida

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Jean Endo
Editor
AIR Forum Publications
Grade Inflation: Reality or Myth?

Student Preparation Level vs. Grades

at Brigham Young University 1975-1994

ABSTRACT

This study was designed to investigate the extent to which grade inflation has existed at BYU after accounting for increased preparation levels of entering students over time. The average ACT score of entering freshmen has gone from the 70th percentile nationally in 1975, to the 90th percentile nationally in 1994. Analyses were conducted for the university at large and individual colleges. Data analysis consisted of (a) developing a model to forecast GPA by preparation factors and from a time series analysis to establish formulas for forecasting levels of inflation adjusted for errors incident to time, and (b) administering a questionnaire to analyze grading attitudes with pre-defined subscales pertinent to grading issues to all faculty who have been at BYU 20 plus years.

The lower third of the student body according to preparation level that existed 20 years ago has all but disappeared. Adjusting for the increased preparation level of students, grade inflation is not presently an overall problem at the university level. However, disparity exists across colleges with some colleges experiencing grade inflation and others experiencing grade deflation. Grades during Spring/Summer term are much more inflated for each of the colleges and the university at large than during Fall/Winter semesters. Differences of opinion on grading issues are abundant among the faculty, though opinions are generally consistent at college levels. University-wide consensus among faculty on a grading policy would be difficult to achieve. If historical trends continue, grade inflation will certainly become a significant problem unless some form of policy or control is instigated.
National Trends in Higher Grades

Over the last twenty years college students across the nation have been receiving higher and higher grades (Astin, Dey, & Korn, 1991; Ornstein, 1992; Summerville, 1990; Weller, 1986). From 1969 to 1983, the proportion of college students with grade-point averages of "A-" or higher almost quadrupled, according to a study by the Institute of Educational Management at Harvard University in Cambridge, Mass. (Walters, 1994). The average student no longer receives "C" grades, but is more likely to receive "B-" or "B" grades.

The median grade point average of graduating college seniors across the nation went from about 2.2 in 1965 to 2.9 by 1982 and over 3.0 in 1994 (Galles, 1994). Until just recently at Stanford University, "F's" did not exist, and 93 percent of Stanford's students received "A's" and "B's" (Kirby, 1994). High schools have gone even farther, making it possible to get better than a 4.0, since many have made advanced placement classes worth an extra grade point (An "A" becomes a 5.0).

America's high school teachers are handing out a record number of "A" grades and fewer "C's" than ever to college-bound students, according to a major national survey of university freshmen. For the 1994-95 academic year over 28 percent of beginning freshmen reported earning "A" averages in high school, up from 27 percent in 1993 and more than double the 12.5 percent who earned perfect grades in 1969. The number of "C" averages dropped to 15.5 percent from over 32 percent a quarter-century ago. Survey director Alexander Astin, professor of higher education at the University of California at Los Angeles, said this "tremendous change" in grading policies does not mean today's students are smarter or harder-working than earlier generations. Astin added "There's no evidence that there's been a corresponding increase in their achievement," in fact, Astin said, "the grade inflation that occurred in the 1970s was accompanied by a substantial decline in test scores. More recent levels of higher grades have gone hand in hand with more or less flat achievement scores" (Wildavsky, 1995, p. A3). Despite receiving higher grades, college students' performance on standardized tests for graduate school
admission shows that the students’ performance levels are not consistent with their grades (Bejar & Blew, 1981; Hamby, 1983; Spinelli, 1981; Wildavsky, 1995).

The grading climate has changed. Students are realizing that it’s not just an undergraduate education that is important. Good grades have become a prerequisite for entrance to graduate school and obtaining a really good job. In light of this, some schools defend increased levels of higher grades by saying that today’s career-minded students are simply outperforming those of previous generations.

Definitions of Grade Inflation

Inflation is defined as the state of being expanded to an abnormal or unjustifiable volume or level. Grades have increased to unprecedented levels. Some consider the rising levels of grades to be inappropriate and unjustifiable. Others consider the rising levels to be quite justified. Whether or not grades are considered to be inflated depends on whether or not they are justified. This justification could be based on the preparation level of students and their performance and merits.

Explanations of increased (or inflated) grade levels can be reduced to (a) an over-time definition, wherein nothing more than the absolute change in grades over a given time frame is considered, (b) a preparation-based definition, wherein the change in grades over time is evaluated after adjusting for changes in the preparation levels of students during the same period of time, (c) a grading standard-based definition, wherein differences in grading practices (i.e. grading on the curve versus a fixed standard) are taken into account when evaluating differences in grades, and (d) an operational definition wherein grade inflation is interpreted as the ratio of a student’s actual grade point average (GPA) divided by his or her expected grade point average according to preparation level.

Brigham Young University

Brigham Young University is unique in many ways. It is a religious institution sponsored by the Church of Jesus Christ of Latter-Day Saints, a worldwide church often known as the "Mormons." Founded in 1876, BYU is currently the largest private university in the country,
with over 30,000 total students. It draws students from all across America and throughout the world. High religious and moral standards are predominant. Graduation requirements include fourteen semester hours of religion classes for students who start as beginning freshmen. Nearly half of the students who enroll at BYU voluntarily interrupt their education for eighteen months (women) to two years (men) to serve at their own expense as missionaries for the LDS church across America and throughout the world. During Fall of 1994, the distribution of returned missionaries on campus was 76 percent of the men and 14 percent of the women. On average, the student body at BYU is older, has more married students, and has more students who are parents than most college campuses. Additionally, many students are fluent in a second language from their missionary experiences.

BYU has not been immune to rising grades over the last several decades. The average GPA of undergraduate courses (course number less than 500) has risen from an average of 2.82 during fall semester of 1977 to 3.13 for fall semester of 1994. This represents an eleven percent increase, or about one-half a grade (from just above a "B-" to just over a "B").

Forty-nine percent of all grades given in undergraduate courses (both lower and upper division) for fall 1994 at Brigham Young University were either "A" or "A-." This is up 15 percent from the 34 percent level in fall of 1985. However, the hard science colleges have 30-40% of their grades in the “A” or “A-” range, compared to the 60-70% level of a number of other colleges.

Some professors and administrators at BYU attribute grade inflation, at least in part, to the rising admission standards and caliber of BYU students. According to Academic Vice President John Tanner, the issue is two-sided. "You've got two approaches to grade inflation," he said. "One is that the grades are too high. The other is that the caliber of students has improved and the grades just reflect the improvement" (Long & Reeves, 1994, p. 1).

The enrollment ceiling at BYU has magnified the difficulty of being admitted as more and more applicants have faced increasing competition for the slots available within the ceiling constraints. In 1973, 5.3 percent of beginning freshmen applicants were denied admission to
BYU. By 1993, 20.8 percent of the beginning freshmen applicants were denied admission to BYU. Admittance to BYU has been reduced to a matter of supply and demand and the survival of the fittest in an academic sense.

Because of the selective admissions requirements, it is not surprising that the preparation level of the students being admitted to BYU has risen to high levels over the years. Entering freshmen are more prepared academically for college than were their predecessors. The average ACT composite score of BYU entering freshmen has risen more than four points, from 22.4 in 1975 to 26.8 in 1994. The average HSGPA has increased from 3.33 in 1975 to 3.66 in 1994 (See Figure 6). This increase of .33 grade points represents an average move from just under a “B+” to just under an “A-”.

The percentile ranking of ACT composite scores represents the relative standing of test takers with respect to population of ACT test takers nationally. Regardless of which test was taken, the old ACT (pre-1989) or the new Enhanced ACT, the mean percentile represents on average how the entering freshmen class at BYU compares to the rest of the nation each year. As shown in Table 1, the percentile jump of entering freshmen at BYU has risen 20 percentiles from the 70.4 percentile in 1975 to the 90.4 percentile in 1994. Indeed, the entering freshmen at present are in the top ten percent of the country according to their composite scores as measured by the standardized ACT college preparation test.

Similarly, the average high school grade-point average of entering freshmen has increased over the last twenty years to the 84.7 mean percentile in 1994 (See Table 1). This contradicts the national trend wherein the rise in HSGPA has been accompanied by a decline in standardized test scores.

Besides the rise in ACT composite scores and HSGPA levels of entering students, other characteristics of the student body are indicative of better preparation levels among students at BYU. Upper division courses are filled with increasing numbers of returned missionaries, older students, and married students, who are mature and serious about school. However, the trend in
returned missionaries as a percent of total student body has shown a 50 percent increase with nearly half of all students (45.3%) having completed a church mission.

Table 1

<table>
<thead>
<tr>
<th>HSGPA, ACT--Percent Increases 1975-1994</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HSGPA</strong></td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>HSGPA Percentile</td>
</tr>
<tr>
<td>ACT Composite Score</td>
</tr>
<tr>
<td>ACT Composite Score Percentile</td>
</tr>
</tbody>
</table>

* Equated to Enhanced ACT

Because of the increasing number of students having delayed their education for voluntary church missions, the composition of the student body is generally older than other college student bodies across the nation. The percent of students age 21 or lower are seven to eleven percent lower than the national average. Accordingly, the percentage of students age 22 to age 24 are thirteen percent above the national average. Additionally, twice as many students are age 25 to 29 at BYU than at other universities.

Advanced placement credit is another barometer showing the increased preparation level of entering college students. Entering freshmen at BYU have shown a steep increase in not only the number of students with AP credit, but the number of hours of AP credit they are bringing with them. As detailed in Table 2, in the ten year period from 1983 to, and including, 1992 the percent of entering freshmen at BYU with AP credit has tripled.

Not only are the entering students at BYU coming with higher ACT scores, higher HSGPAs, more AP credit, but they are taking fewer courses per semester at BYU. The average
course load per semester has decreased from 15.8 credit hours in 1970 to 14.1 credit hours in 1994 with a low of 13.5 in 1989.

Table 2

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Students with AP Credit</td>
<td>15%</td>
<td>24%</td>
<td>34%</td>
<td>46%</td>
</tr>
<tr>
<td>Avg.# AP hours / AP Student</td>
<td>11.6</td>
<td>15.2</td>
<td>16.8</td>
<td>17.5</td>
</tr>
</tbody>
</table>

Note. From BYU Institutional Studies

Current BYU students do not feel like grades are inflated and resent efforts to reduce "grade inflation" (Brown, Esplin & Sorenson, 1995). Based on the increased preparation level of students at BYU, it is conceivable that the higher grades earned at BYU are not due to grade inflation, but are in fact deserved. In light of the grading image of BYU as interpreted by potential employers and graduate schools as well as ongoing assessment, an analysis of grading tendencies at BYU with respect to student preparation level is warranted. This analysis would be valuable at the university, college, and department level to determine the existence of grade inflation.

Statement of Problem

Higher grades are rampant across the country. Are the recipients of these higher grades smarter and better students than their predecessors of past generations? Could these students merely be the products of mediocrity in education crossed with intensely increased competition in society? An underlying issue is simply whether or not trends in higher grades are justified by higher preparation levels as measured by previous performance and merits of the students.
BYU is not immune to higher grades. The percent of students receiving higher grades at BYU has increased over the past decades. But, just as grades have increased at BYU, so have the preparation levels of the students. High school grades are higher. ACT scores are higher by 20 percentile points. Students are older. More students have returned from voluntary church missions. Students are focusing on smaller course loads. More students are coming with advanced placement credit and more of it. The increase in the preparation levels of students entering students is greater than the increase in undergraduate grades. The grading patterns at BYU have changed, but so has the profile of the student body.

True grade inflation would be the presence of higher grades after grade increases have been adjusted for changes in the student body over time. Taking into consideration the increased preparation level of entering students at Brigham Young University, the problem addressed by this study is whether or not and to what extent grade inflation exists at BYU.

The resolution of this problem is important. Grade inflation is troublesome. It has cancerous potential for a university. It is unfortunate that institutions are identified with grade inflation and their students penalized. It is even more unfortunate if such identification and subsequent consequences are not justified. Research of grade inflation at BYU taking into account changes in student characteristics over time could be instrumental in getting to bottom of this issue.

**Research Questions**

The three research questions investigated in this study are as follows:

1. To what extent does grade inflation exist at the university level at Brigham Young University when adjustments are made to account for changes in students' preparation level over time as measured by the ratio of students' expected college grades and their actual college grades from Fall semester 1975 through and including Fall semester 1994, as analyzed by time series analysis?
2. To what extent does grade inflation exist within individual colleges at Brigham Young University when adjustments are made to account for changes in students' preparation level over time as measured by the ratio of students' expected college grades and their actual college grades from Fall semester 1975 through and including Fall semester 1994, as analyzed by time series analysis?

3. To what factors do faculty, who have been at Brigham Young University 20 or more years, attribute a trend in rising grades?

Sample

The sample for this study consisted of two distinct sets of subjects. One set was those undergraduate students who were enrolled at BYU at any time during the time period from Fall Semester 1975 to Fall Semester 1994. The other set was a select group of current full-time faculty.

The student subjects used for this study consisted of all undergraduate students enrolled at Brigham Young University from Fall semester 1975 through and including Fall semester 1994. Over seven million classes taken by these students were evaluated amounting to approximately 570 megabytes of raw data.

The faculty subjects used for this study consisted of all faculty who have been teaching at Brigham Young University for twenty or more years. This population included 406 full-time faculty who met this criterion. These faculty represented one third of the total full-time faculty for the 1994-95 academic year at Brigham Young University.

Design

The design of this study is quasi-experimental utilizing a two-fold approach. One approach used a quantitative design using archival quantitative data. The other approach
implemented a survey design utilizing qualitative data obtained from a questionnaire administered to the senior BYU faculty.

The quasi-experimental design incorporated (a) a baseline model developed specifically for this study to predict students' expected college GPA, and (b) time series analysis of the ratio of students' actual college grades over time and their expected grades over time--based on preparation level.

The baseline prediction model developed was an expansion of a model created in 1985, which predicted the first semester GPA of beginning freshmen using a student's high school GPA and their ACT composite scores as the independent variables (Rowe, Higley, Larsen, & Bills, 1985). The 1985 model had an $R^2$ of .304 for men and .343 for women.

The enhanced model created specifically for this study was established using regression analysis via SAS. The regression analysis was applied to actual data of over 56,000 students, who attended BYU during Fall semesters over the five-year period 1970-74. The dependent variable was specified as students' college GPA at BYU for the given semester. The significant independent variables for each student included: (a) year in school or class, (b) gender, (c) high school GPA, (d) ACT composite score, (e) course load or number of semester credit hours carried, and (f) whether or not a religious mission had been completed. The effect of the interaction terms was investigated. However, the inclusion of interaction terms variables into the model didn't make any significant difference. Gender, year in school, and returned missionary status were treated as discrete variables and handled accordingly. High school GPA, ACT composite scores, and course load were treated as continuous variables. The new model (See Table 3) is an enhancement of the previous model (Rowe, Higley, Larsen, & Bills, 1985), which did not include course load, year in school, or returned missionary status as independent variables.

Note that the coefficients relative to the discrete variables as noted in Table 3 were only added in the computations of the expected college GPA when any of the specified conditions of female, returned missionary, sophomore, junior, or senior applied to the student involved.
Table 3

**Expected GPA Linear Regression Model**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t</th>
<th>Prob &gt;</th>
<th>t</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.304</td>
<td>.022</td>
<td>-14.009</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Act Composite Score</td>
<td>0.035</td>
<td>.001</td>
<td>46.583</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (Female)</td>
<td>0.067</td>
<td>.007</td>
<td>9.978</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School GPA</td>
<td>0.493</td>
<td>.006</td>
<td>82.765</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Load</td>
<td>0.037</td>
<td>.001</td>
<td>34.967</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Returned Missionary</td>
<td>0.226</td>
<td>.007</td>
<td>33.632</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sophomore</td>
<td>0.127</td>
<td>.006</td>
<td>20.801</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Junior</td>
<td>0.235</td>
<td>.007</td>
<td>34.132</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior</td>
<td>0.332</td>
<td>.008</td>
<td>40.562</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The model was further tested by applying it to the data by which it was created. A sample of 1000 students, who attended BYU from September, 1970 through August, 1974, was randomly selected. Using equation 1, the predicted BYU semester GPAs were computed and a Pearson correlation was run. This resulted in an R of .56. The means of the actual semester GPAs and the predicted semester GPAs are presented in Table 4. The average difference in GPA was .03. The standard deviation of the actual semester GPAs was .75 compared to .41 for the predicted semester GPAs. A paired t-test was run which verified that no significant difference existed between the actual and expected grade point averages. The resulting t-value was 1.71 with a corresponding p-value of .088.

Additionally, the model was tested by applying it to data from the time period of the study. A sample of 1000 students, who attended BYU from September, 1975 through December, 1994, was randomly selected. Using the coefficients in Table 3, the predicted BYU semester GPAs were computed. The means of the actual semester GPAs and the predicted semester GPAs...
are presented in Table 5. The average difference in GPA was .01. The standard deviation of the actual semester GPAs was .74 compared to .39 for the predicted semester GPAs. A paired t-test was run which verified that no significant difference existed between the actual and expected grade point averages. The resulting t-value was 0.28 with a corresponding p-value of .777.

Table 4

**Actual vs. Predicted Semester GPA--1970-1974**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>Std. Error of Mean</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual BYU Semester GPA</td>
<td>2.88</td>
<td>0.753</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Predicted BYU Semester GPA</td>
<td>2.85</td>
<td>0.405</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference (Actual-Predicted)</td>
<td>0.03</td>
<td>.020</td>
<td>1.71</td>
<td>.088</td>
<td></td>
</tr>
</tbody>
</table>

Table 5

**Actual vs. Predicted Semester GPA--1975-1994**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>Std. Error of Mean</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual BYU Semester GPA</td>
<td>3.00</td>
<td>0.744</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Predicted BYU Semester GPA</td>
<td>2.99</td>
<td>0.386</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference (Actual-Predicted)</td>
<td>0.01</td>
<td>.021</td>
<td>0.28</td>
<td>.777</td>
<td></td>
</tr>
</tbody>
</table>

This model was then applied to all undergraduate students, who have an ACT composite and high school GPA on record, who were enrolled during a twenty year period in any number of semesters (Fall or Winter) or terms (Spring or Summer) beginning September 1975 through
and including December 1994. All ACT composite scores were equated to the Enhanced ACT according to the published concordance table as they were used in the model.

The model was applied for each semester or term a student was enrolled. The unit of measure for this study was each class grade received for each of these students over the specified time frame. As such, the data analyzed for each class taken by these students consisted of (a) the student's expected college GPA for semester or term as calculated by the prescribed model, (b) the student's numeric grade value in the class (i.e. 'A' = 4.0, 'A-' = 3.7, etc.), and (c) the subject matter of the course (i.e. English, Math, etc.). Based on the discipline (department) of the courses, the data were classified by specific college within the university to permit an assessment of grade inflation within individual colleges. A separate analysis was conducted for the university at large. The data were analyzed using time series analysis of the ratio of the actual numeric grades divided by the expected grades. A ratio significantly larger than 1.0 would suggest grade inflation. Conversely, a ratio significantly smaller than 1.0 would suggest grade deflation. A ratio of 1.0 would suggest neither grade inflation nor grade deflation.

Faculty Questionnaire

The survey design incorporated a questionnaire which was administered to all current faculty with 20 or more years of teaching experience at BYU. The purpose of the questionnaire was to ascertain the perceptions and attitudes of faculty with respect to grading, and student abilities at BYU over the time span of the study (1975-94).

Questions were developed within five major scales dealing with potential factors of grade inflation. The scales included (a) brighter and better prepared students, (b) pressure on faculty, (c) grading policy, (d) competition, and (e) changes in class difficulty/curriculum over time. The questionnaire was pretested with a number of faculty as it was developed and finalized.
Findings

Levels of inflation or deflation can be interpreted as being structural or temporal. Temporal inflation/deflation is associated with interpretations relative to changes or trends over periods of time. For example, analysis of the change from 1974 to 1994 in levels of inflation or deflation for a particular entity is indicative of temporal inflation or deflation. Structural inflation/deflation is associated with specific points in time. Looking at the specific level of inflation/deflation for 1994 is an example of structural inflation.

Through the course of the development of the time series models it became clear that a significant difference exists between the ratio of actual grades to expected grades for Spring/Summer terms as compared to Fall/Winter semesters. Thus, the results are presented making that delineation. For the university as a whole the percent of undergraduate student credit hours taught during Spring and Summer terms has accounted for approximately 10.7 percent to 14.9 percent of the total undergraduate student credit hour production in a given academic year over the last 17 years.

The results of the time series analysis were determined by applying the derived model to the data and calculating the fitted ratios by semester and term for the university. The results at the university level are presented in Figure 1. It is clear from the graph that a difference exists between Fall/Winter and Spring/Summer. The time series fitted ratio for Fall/Winter for the university indicates that from 1975 until about 1991 structural grade deflation actually existed. Since 1991, Fall/Winter grades at the university level appear to be neither structurally inflated or deflated. The situation at the university level for Spring/Summer terms paints a different story. The time series fitted ratio for Spring/Summer for the university reflects structural grade inflation for the duration of the study.
The trend lines for both Spring/Summer and Fall/Winter are slightly increasing over time with Fall/Winter climbing a nearly twice as fast with a slope of .00163 as compared to .00079 for Spring/Summer. Interestingly enough, the dip for Fall/Winter (1980-86) was paralleled by the Spring/Summer line. The slopes of these lines were found to be significant, indicating temporal inflation. However, the Fall/Winter trend line, which accounts for nearly 85% of the student credit hours annually, will rise to 2% structural inflation in ten years (2004) and to 5% in 20 years (2014). By contrast, the Spring/Summer trend line, which accounts for nearly 15% of student credit hours annually, will rise slightly to 13% structural inflation in 10 years (2004) and to 15% in 20 years (2014).

The university level of analysis is the sum of the individual colleges analyzed. Even though the term university represents a unified group, one should not be surprised to encounter
differences between colleges. As the model was applied at the college level at BYU contrasting differences were found. The findings of two colleges at opposite ends of the spectrum are presented with College A being a college whose results indicate levels of grade inflation, and College B depicting a college whose results reflect levels of grade deflation.

The results of the time series analysis for the College A are presented in Figure 2. Structural grade inflation has existed for both Fall/Winter and Spring/Summer throughout the time frame of this study. Grades for Fall/Winter have increased from five percent structural inflation in 1975 to about 14% structural inflation in 1994. Grades for Spring/Summer have varied from 20% structural inflation in 1975 to 25% structural inflation in 1994 with a low of 17% structural inflation in 1980, 1981. The trend lines for both Fall/Winter and Spring/Summer are both significantly and positive, indicative of temporal inflation. In 10 years (2004), if the
The results of the time series analysis for the College B are presented in Figure 3. Since 1975, during Fall/Winter structural grade deflation has existed. Since 1980, Fall/Winter structural grade deflation has increased and fluctuated between 11 and 17 percent. The Spring/Summer line depicts a time of structural grade inflation from 1975 to 1980, which subsequently became stationary at an equilibrium of neither structural inflation nor deflation. The trend for both Fall/Winter and Spring/Summer are significantly negative, which signify temporal grade deflation. This is the only college at the university to have such a phenomenon heading towards a state of structural deflation for all classes regardless of semester or term. 

Since 1979, grades became more structurally deflated by about 5-8% for both Fall/Winter and
Spring/Summer. At the current rate Fall/Winter grades will be structurally deflated by 20% in 10
years (2014).

Faculty Questionnaire

The resulting data for each of the subscales at the university level are presented in Table 6. The mean values represent a range of zero to 4 with the following interpretation: 0 = disagree strongly, 1 = disagree, 2 = mixed feelings, 3 = agree, and 4 = agree strongly. Subscales 1, 4, and 5 had mean scores greater than 2.0 with a median of 3.0 indicating the responding faculty agreed with these subscales. Subscale 2 had the lowest mean score and a median of 1.0 indicating the respondents disagreed regarding faculty pressure and grading patterns. Subscale 3 had a mean score less than 2.0 and a median of 2.0 showing that the respondents had mixed feeling on the notion of grading policy influencing grading patterns.

Table 6
Mean Attitude Scores, Median Attitude Scores, and Standard Deviation by Subscale

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Number of Respondents</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Today's students are brighter and better prepared to succeed in college.</td>
<td>332</td>
<td>2.28</td>
<td>3.0-agree</td>
<td>.78</td>
</tr>
<tr>
<td>2. Faculty pressure from colleagues/superiors affect grading patterns.</td>
<td>332</td>
<td>1.65</td>
<td>1.0-disagree</td>
<td>.73</td>
</tr>
<tr>
<td>3. Grading policy influences grading patterns.</td>
<td>332</td>
<td>1.91</td>
<td>2.0-mixed</td>
<td>.70</td>
</tr>
<tr>
<td>4. As a result of changes in curriculum, the courses taught at the university nowadays are more demanding on students than courses were 20 years ago.</td>
<td>332</td>
<td>2.29</td>
<td>3.0-agree</td>
<td>.66</td>
</tr>
<tr>
<td>5. Competition among students for acceptance to programs, graduate school and in obtaining jobs motivates students to earn higher grades than 20 years ago.</td>
<td>332</td>
<td>2.38</td>
<td>3.0-agree</td>
<td>.65</td>
</tr>
</tbody>
</table>
Discussion

So what does it all mean anyway? Grade inflation at BYU has been investigated using historical data and from feedback from senior faculty on campus. The data in this study suggest that structural grade inflation is not an overall problem at the university level. Spring/Summer presents a compelling picture of structural grade inflation. For Fall/Winter semesters temporal grade inflation exists in most of the colleges.

There can be big differences in a student's GPA, depending upon which college a student enrolls in classes from or whether they enroll during Spring or Summer term as opposed to Fall or Winter semester. Grades were found to not only be significantly higher during Spring/Summer in an absolute sense, but more structurally inflated than for Fall/Winter. Students would be better off from a GPA standpoint to attend Spring or Summer term than Fall or Winter semester, especially if they are concerned about having the highest possible GPA.

The lower third of students formerly in their classes has all but disappeared. It can be concluded that this supports the apparent, non-written but adhered to by many, understanding that a C grade is no longer average as referenced in the catalog, as least as far as the average student at BYU is concerned. Differences of opinion on grading issues and practices are apparent at BYU between different colleges.

Due to the differing views on grading practices on campus, the likelihood of attaining faculty consensus on a university grading policy would be slim. For some the question of "Do we have a problem with grade inflation?" is the wrong question. They feel the question is really "Are the students really learning". Colleges that agree that grades should be on a fixed standard of performance rather than on a curve award higher grades than those who prefer a curve. Equity in grading is a product of grading philosophy.
References


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