Florida Institute of Technology's Inaccurate Grading System

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Abstract

The Accuracy in Grading Committee at Florida Tech investigated whether or not the GPA scale is an accurate assessment of a student's work. After researching GPA scale studies from colleges and universities of varying size and discipline the committee determined the current scale provides too large of a range between grade levels that is not representative of academic performance. After researching student opinion on the matter the committee found that most students were reluctant to change the scale but very few students are familiar with a GPA scale other than the one currently in use at Florida Tech. We also interviewed university officials including the registrar, Charlotte Young, who is responsible for the grading infrastructure at Florida Tech as well as Dr. Andrew Cudmore, Faculty Senate president-elect. Lastly we interviewed Dr. Ryan Stansifer of the computer science department. All of our interviews confirmed that implementing a new GPA scale at Florida Tech would be logistically feasible, costing the university virtually nothing. Our report outlines the need for a new plus-minus GPA scale that will enable the university to provide better feedback on students' academic performance. Implementing a new system will be virtually cost free and nothing should be more important at Florida Tech than accurately assessing academic achievement.

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Introducing Florida Tech's GPA Scale

A fundamental principle of a school's grading system is that it should offer accurate feedback to students: commending them for exceptional work and directing their attention to areas needing improvement. Florida Tech uses a very broad Grade Point Average (GPA) scale that increases by an entire point with each letter grade (Table 1). Consequently professors at Florida Tech often use a ten percentage point spread from one grade to the next for class averages as well as assignments and tests. This extremely wide range leaves grading criteria to be ambiguous at best. For example, the difference in academic quality between a very high "B" that borderlines an "A" and a very low "B" that borderlines a "C" is stark. Thus a gross disparity exists between school work and an appropriate grade at Florida Tech.

A	4.00
B	3.00
C	2.00
D	1.00
F	0.00

Table 1
Current GPA scale employed by Florida Tech

Exploring Alternatives

In order to better understand the reality behind our faulty GPA scale as well as remedies that may exist to improve the accuracy of the GPA scale, we employed a number of research methods.

First we researched what GPA scales other universities use with any special attention that may be necessary to determine whether a certain scale correlates to a size of a school or the disciplines it specializes in. We also researched any studies done by the universities regarding their GPA scales that we hoped would provide a more quantitative picture as to their GPA scale's effectiveness in accuracy.

After gaining a better insight into the GPA scales that exist in the academic world as well as a comprehensive understanding to their advantages and disadvantages we personally interviewed several university officials at Florida Tech. We interviewed the registrar, the university official who would responsible for implementing any GPA scale change as well as the official who currently maintains the process for recording grades at Florida Tech. We also interviewed Dr. Andrew Cudmore, Faculty Senate president-elect who would most certainly be involved in any decision with the provost to change the GPA scale. Lastly we interviewed Dr. Ryan Stansifer who had important insights into the GPA scale at Florida Tech.

An Alternative GPA Scale

After extensive research from the academic world, the committee found a much more accurate GPA scale being used throughout the U.S. in a very diverse range of colleges and universities. This new GPA scale (Table 2) is often referred to as a plus-minus scale and is far more accurate than the current system currently employed at Florida Tech. As a result of the benefits described in the following, the committee formally recommends that Florida Tech employs this new plus-minus GPA scale.

Referring to Table 2, one can clearly see that the plus-minus offers a far more critical range of grades. The grade received by an individual is much more clearly explicable because professors have the freedom to assign a more specific and telling grade. The new plus-minus ensures academic feedback is pointed and helpful to the student. Professors are not left to struggle with decisions between borderline grades; instead, they can assign grades carefully and explicitly by choosing between a high "plus" grade, straight letter grade, or a lower "minus" grade. Grade inflation is an important topic in the academic world today, and our GPA scale addresses this issue. No longer does a very high "C" grade unfairly slip into the same category as a very low "A" grade under the umbrella of a "B" grade. GPAs on this scale are far more representative of the quality in which students output. Instead of allowing a student to receive an "A-" rather than a straight "A" grade, a student's GPA does not become unnecessarily inflated. Again accuracy is best maintained under our plus-minus system.

This new plus-minus GPA scale also protects graduate students from Florida Tech. Often plus-minus systems include an "A+" in their systems allowing for some students to graduate with a GPA greater than a 4.0. Some colleges and universities proportionally scale down GPAs greater than 4.0, a possible disadvantage to students going through the graduate admissions process. For example, say the highest possible GPA is a 4.3 from a particular university. Often universities will take that 4.3 and convert it to a 4.0 scale. Thus subsequent GPAs from that university are also scaled down. For example instead of being recognized for having a 3.7 GPA a university could then scale it back to a 3.4 GPA. This could misrepresent the GPA of a graduate student as well as the quality of his or her work. Our plus-minus GPA scale prevents any such scenarios and protects our graduate students by making the GPAs at Florida Tech capped at 4.0.

When students recognize that the GPA scale is far more critical especially when it comes to Grade Point Average calculations they could be quick to deem this GPA scale a dangerous prospect for scholarships as well as their grades in general. In reality this is not the case. Although it is almost certainly a fact that GPAs on average will drop with the implementation of a plus-minus system, this drop has been found to be very small. For example North Carolina State University reported only a 4/100 of a point drop in GPA[1] and Eastern Kentucky University reported only a 1/100 of a point drop[2]. Clearly

[1] Mohler, Chad. "Information on Plus/Minus Grading"
[2] "Final Report of the UTA Task Force Investigating Plus-minus Grading"

the drop in GPA could just as easily fluctuate by those amounts from one year to the next with no GPA scale change.

The Proven Alternative

A wide variety of universities have successfully implemented the plus-minus system from large state universities to small private colleges across various different disciplines of study[3]. Many of the universities that have switched to plus-minus systems have employed a year long trial period with the new system before making the change permanent. Almost all universities that use such a trial period never go back to their old GPA scales. Florida Tech could almost certainly employ similar trial periods, taking into consideration both faculty and staff opinion and, of course, student opinion.

A	4.00
A-	3.67
B+	3.33
B+	3.00
B-	2.67
C+	2.33
C	2.00
C-	1.67
D+	1.33
D	1.00
D-	0.33
F	0.00

Table 2
Proposed GPA scale at Florida Tech

Surveys

Methodology

In order to gather the opinions of Florida Tech's student body, we decided to use surveys. We distributed these surveys by hand and had hoped to get 100 or more completed from a variety of majors. We also hoped to get an equal distribution of the student body from freshmen to graduate students. Since survey participation was low, we decided to distribute these surveys online to get even more responses. This also allowed us to obtain even more exposure to a variety of students and give them time to complete these surveys at their leisure.

[3] "Plus/Minus Grading FAQ - Foothill/De Anza Pilot Study on Plus/Minus Grading"

Physical Creation

In the construction of our surveys, we had to design them in such a way that we could get both the statistical information and personal opinions desired. While doing so, we had to keep in mind not to make the surveys too long or complex so the survey takers would not be reluctant to take the survey. We also needed to keep in mind not to phrase any leading questions so we could get the best representation of the student body's thoughts on the subject. To design the surveys, we drafted ideas on what information we needed and what statistical information we would need to help us analyze the data. For example, freshmen in general might feel differently than seniors, as seniors are used to the current GPA scale, making them more reluctant for change.

Online Setup

The online aspect of the surveys was to recreate the physical surveys so we could distribute them online to a larger mass of people in hopes they fill it out. The survey was a replication of the physical survey and was written in ASP and VBscript.

The information collected from each survey was stored in a Microsoft Access Database which was chosen for easy data interpretation and analysis.

Analyzing Results

The total response rate for the physical and online surveys combined was 116 which surpassed our target rate of 100 responses. Our sample population was a fair representation of the student body at Florida Tech. Nearly 40 majors were represented, including several dual majors. Engineering majors appeared to be more predominant than other majors.

The survey asked students about the current standing at Florida Tech as well as their current GPA. All standings were equally represented in our sample population, including graduate students. On average, standing representation ranged from 15% to 25%.

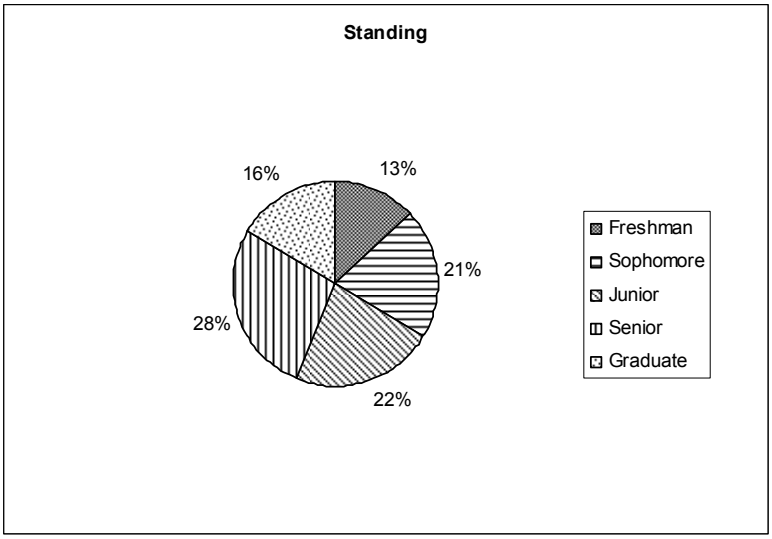

Figure 1
Distribution in class standing

The vast majority of people who were interviewed indicated their GPA. About two thirds of our sample population had a GPA that ranged from 3.0 to 4.0, while one quarter had a GPA that ranged from a 2.0 to a 3.0. A mere five percent ranged from 1.0 to 2.0, while no students indicated a GPA below 1.0. The overwhelming majority of the 3.0 to 4.0 range is in line with what the actual student body the surveys want to represent. It would be unrealistic to expect equal representation of all GPA ranges. Overall, the student body is fairly represented for what concerns GPA range.

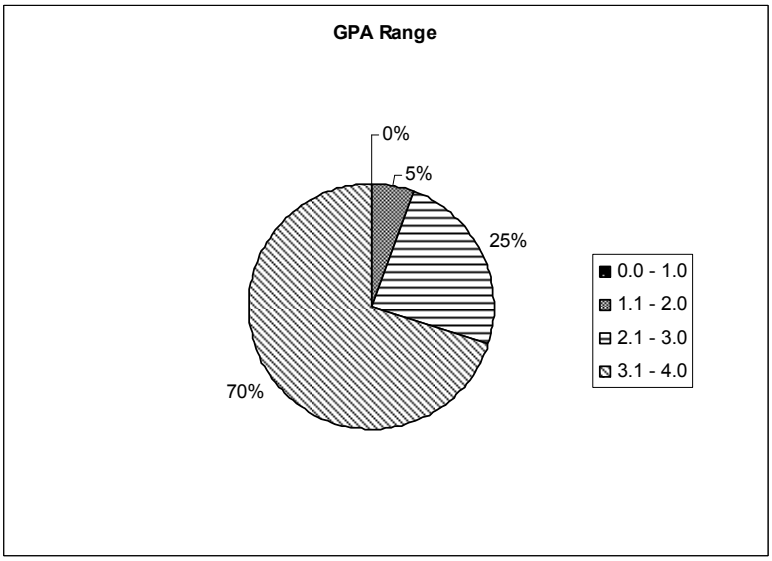

Figure 2
Distribution in GPA range

Two separate pieces of information were collected about the overall consideration of the current GPA scale at Florida Tech. Students were asked whether or not the system should be changed, as well as to indicate, on a scale from 1 to 5, from low to high, how accurately they thought the current scale represents their academic performance. About 25% of the students called for a change in the current system. Nevertheless, the average perceived accuracy of the current scale was only slightly above satisfactory, a mere 3.55 out of a possible 5. When dealing with delicate issues such as grading, it is not acceptable that students believe they are being graded somewhat fairly.

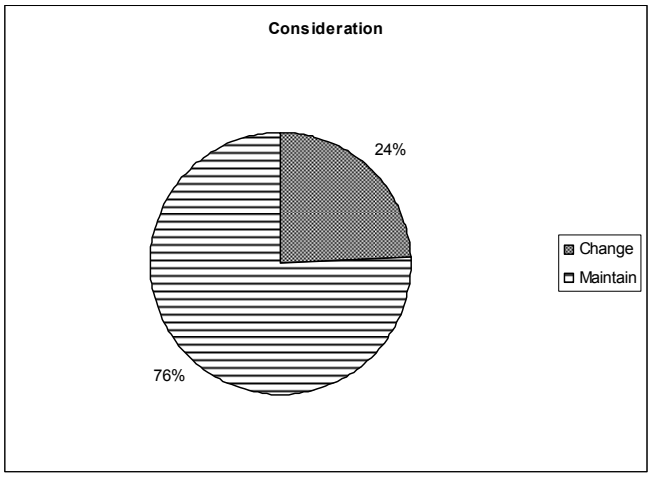

Figure 3
Consideration of current GPA scale

The survey also aimed at statistically categorizing interviewees based on their past experience with different GPA scales. This piece of information allowed us to determine that of all those people who indicated that the current GPA scale at Florida Tech should be maintained as is, about 75% has had experience with the same GPA scale in High School. This can easily be related to students being accustomed to a certain system and being more reluctant or fearful to change.

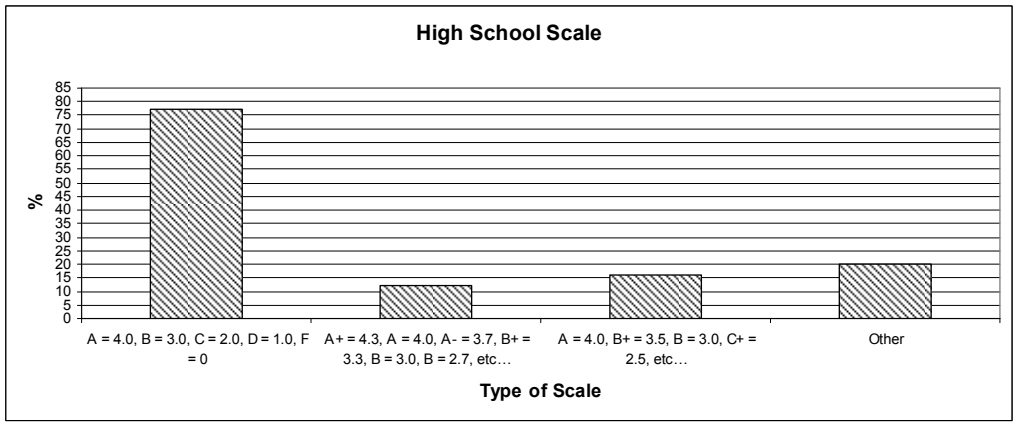

Figure 4
Distribution in past GPA scales

Our studies also show that the perception of how accurate the GPA scale is independent of the student's current GPA. While designing the survey, we believed this would play a major role in an interviewee's views on the subject matter. Instead, students with high GPAs still believed that the current scale does not at all, or does a poor job at accurately representing academic performance.

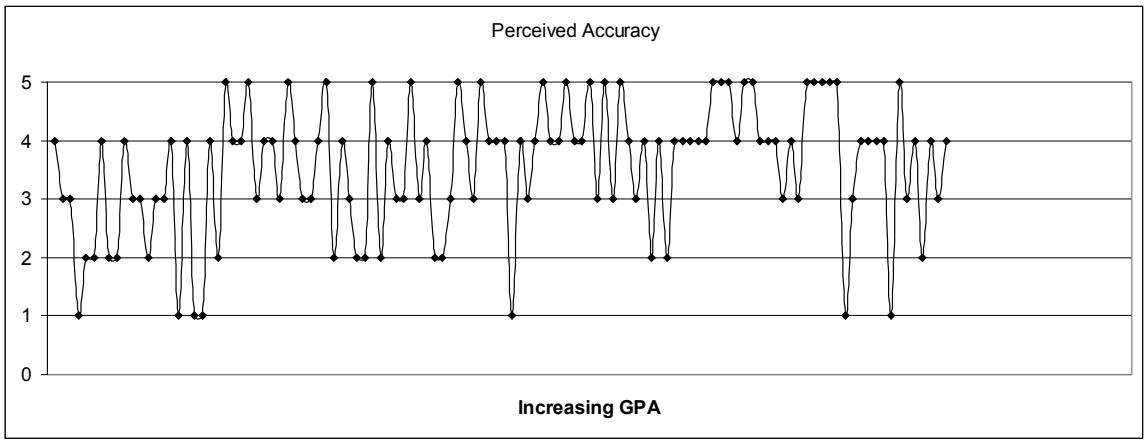

Figure 5
Perceived accuracy over increasing GPA

Finally, our survey also included a section specifically dedicated to interviewees' proposals to improve the current GPA scale. The majority of those interviewees who did provide a response to this section, called for a system which includes pluses and minuses. Furthermore, extensive responses led to interviewing those professors which students indicated as grading in such a way deemed worthy of discussion.

Interviewing Officials

Interview with Dr. Stansifer, Associate Professor

Dr. Stansifer, an Associate Professor in the Computer Sciences Department, who taught at the university level for twenty years, summarizes the reluctance of faculties to change to a plus-minus system as the unwillingness to make more "potentially contentious decisions."[4] While it is true that doubling the amount of possible ways to evaluate a student's work increases the grading efforts of professors, it is nonetheless true that accuracy cannot be walked upon in the sake of time or workload. Furthermore, Dr. Stansifer duly notices that such a system would increase the pressure on students, especially during exam time, when grades are coming to a close. While also this is true, once again accuracy cannot be traded off for anything. Furthermore, it is in the interest of the whole academic community to have students at Florida Tech always striving for improvement.

[4] Stansifer, R. E-mail to E. Panero.

Interview with Dr. Cudmore, President Elect, Faculty Senate

We also interviewed Dr. Cudmore. He is an Assistant Professor in the College of Business and he serves on numerous committees. One of these committees is the Faculty Senate. This particular committee is notable because the Faculty Senate is the primary advisory committee to the provost. As mentioned earlier, the provost is the decision maker on our issue. In fact, Dr. Cudmore is the president elect of the Faculty Senate which means he will be the Senate's next President. With this considered, Dr. Cudmore clearly has a strong voice and potential for supporting our issue.

Before interviewing Dr. Cudmore, he filled out one of our surveys and he indicated that he believes Florida Tech's current GPA scale should be modified. When asked how it should be modified, Dr. Cudmore mentioned the plus-minus system. This suggestion was not encouraged in any way by the interviewer. Dr. Cudmore was also asked about the issue of an A+ being worth more than 4.0 on the GPA scale. At the time of the interview, Dr. Cudmore did not have a stance on that matter. However, the plus-minus system we are proposing takes care of the problem of graduate students' GPAs being scaled down by eliminating the A+ from our scale. This way, our school's graduate students are not at a disadvantage when continuing their education.

When asked about the likelihood of Florida Tech adopting a new grading system, Dr. Cudmore mentioned schema theory. A schema is basically your perception on something. For example, everyone has a schema on police officers. Some people believe that they are just human beings doing their job. Other people believe that they are just out to get you and to meet their ticket quota for the month. Likewise, Florida Tech has its own schema on what they believe a grading system should be. They have not changed the grading system since the university was founded in 1958. On the same token, students have their schema of a grading system as well. Of the students who indicated on our survey that they felt the current grading system should be maintained, 75% of them had used this exact same grading system in high school. Thus, they are used to it and will be more challenging to convince than those students who are not so accustomed to this particular system.

Considering Dr. Cudmore's support and his position on the Faculty Senate, he is a valuable asset to the project and we are confident that his input will provide the push needed for the provost to take serious consideration on the matter.

Interview with Charlotte Young, Office of the Registrar

We also interviewed Charlotte Young, Supervisor of Assistant Provost and Registrar. She used to work at the Southern University, and during her tenure they converted to a new GPA scale. We believe she can give us a good insight about this issue since she has been through this before.

She believes by using the Plus/minus system we can be more specific. She also explained that the school has the program database needed to convert to a new scale. As far as labor and finance goes, it is not an issue; she elaborates on that "I can't think about any financial problems involving such a change." She believes it is a philosophical issue rather than a logistical one.

Informing the student would take some time. The school will be more likely to take its time to make sure that all students have been informed about any change. For example, when the school decided to change the dean's list, it took them two years to do so. There are different ways to inform students: emails, memos, and catalog updates. Overall, this is a normal operation for the school; they send emails routinely and they update the catalog every year. Should the school decide to change the GPA scale Charlotte Young contended that it would be logistically realistic and virtually cost free.

Envisioning a New GPA Scale

The current GPA scale at Florida Tech is an outdated model that clearly does not provide accurate feedback to students. The plus-minus GPA scale we have proposed (Table 2), provides professors with a more critical grading system that rewards students more appropriately and offers constructive criticism for improvement. As testified from the university registrar, the implementation of a new GPA scale would be logistically painless and virtually cost free. The plus-minus GPA scale is an easily implemented solution to maximize the accuracy in grading at Florida Tech.

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Stansifer, Ryan. "Re: GPA Scale." E-mail to E. Panero. 29 Nov. 2005.

Young, Charlotte. Personal interview. 18 Nov. 2005.

Appendix A

Student Survey

The purpose of this survey is to gain an understanding of what students at Florida Tech think of the current university GPA scale. Thank you for taking your time in answering these few brief questions.

What is your standing?

☐ Freshman ☐ Sophomore ☐ Junior ☐ Senior ☐ Graduate

What is / are your major(s)?

✎ _____

What is your current GPA?

✎ _____

What was the GPA scale adopted by your high school?

☐ A = 4.0, B = 3.0, C = 2.0, D = 1.0, F = 0

☐ A+ = 4.3, A = 4.0, A- = 3.7, B+ = 3.3, B = 3.0, B = 2.7, etc…

☐ A = 4.0, B+ = 3.5, B = 3.0, C+ = 2.5, etc…

☐ Other

What is your consideration on Florida Tech's current GPA scale?

☐ It should be maintained as is
☐ It should be modified.

If so, how?

✎ _____

On a 1 to 5 scale (1 being very inaccurate, 5 being very accurate), how accurately do you feel Florida Tech's GPA scale reflects your work?

✎ _____

Appendix B

From: Ryan Stansifer [mailto:ryan@cs.fit.edu]
Sent: Wednesday, November 30, 2005 10:44 PM
To: Eugenio Panero
Subject: Re: GPA Scale at Florida Tech

OK, but let me say there are two completely separate matters at hand. (1) What an instructor does in class, and (2) what grade possibilities the student receives from the university. I am more interested in (1) and I think the survey is aimed at (2).

The (2) is obviously not in the instructor's control, and what is less obvious is that is not really in the university's control either. For the system to work it has to be a common scheme. There are are [sic!] few minor difference [sic!], notably +/-. Faculties nearly always favor no +/- because then they have to make fewer potentially contentious decisions.

Psychologically educators for the most part believe a grading scheme/scale has absolute meaning. I don't believe this is true, at least in the usual college context.

So, "accuracy in grading" is possible only in very controlled contexts and not at a university. Students should seek and demand consistent, meaningful, and lots of feedback. I, like my colleagues, often fail to provide such feedback. On the other hand I would say that overall the grades students receive are usually accurate (accurate as humanly possible) though of course the gradee never perceives it as such. The gradee sees a thousand imperfections and biases in grading, and the grades never mean the same thing twince [sic!]. But the grades are usually rational from the point of view of the instructor and objective observer.

_____

>From: Eugenio Panero [mailto:epanero@fit.edu]
>Sent: Tuesday, November 29, 2005 8:05 PM
>To: Ryan Stansifer
>Subject: GPA Scale at Florida Tech

>Dr. Stansifer,

> Our group, the Accuracy in Grading Committee, is currently involved
>in research concerning the GPA scale at Florida Tech. We have conducted
>student polls, and one student submitted an extensive response where he
>or she describes your current grading schemes as one of the best
>encountered so far.

> I realize these are the last two weeks of the term, and work is very
>condensed, but it would be very valuable for our purpose to know what
>your opinions are on a few questions:

>How many years have you been teaching at university level?

20 years.

>What GPA scales have you encountered in your teaching experience?

> A = 4.0, B = 3.0, C = 2.0, D = 1.0, F = 0
> A+ = 4.3, A = 4.0, A- = 3.7, B+ = 3.3, B = 3.0, B = 2.7

>   A = 4.0, B+ = 3.5, B = 3.0, C+ = 2.5, etc...

Both ABCDF (here), and AA-B+BB-C+CC-D+DD-F. I have some familarity [sic!]
with German university grading.

>Do you have your own unique grading system that you use in your classes?

I use an scheme that is not common here. I separate giving a grade from
giving feedback. I grade only once at the end of the semester and my
usual rule is that an A is std dev above average, B is above average, D
is std dev below average. This is more generous that the classical:
average is middle C. During the semester I grade each item on a scale
of 0 to 10 and just add all the items up, perhaps weighted by their
importance. I have a "rank in class" which I think is valuable in
letters of reference.

>Do you think Florida Tech's current GPA scale should be maintained as
>is, or modified?

I have no problem with ABCDF.

>If so, how?

>On a 1 to 5 scale (1 being very inaccurate, 5 being very accurate), how
>accurately do you feel Florida Tech's GPA scale reflects students' work?

The question is not a good one. Does any grading scale have absolute
meaning? No. Will any grade accurately reflect anything? No. Will
+/- change anything? Perhaps. Psychological trauma and upward grade
pressure may compress GPAs even more, making GPAs even less useful
than they are now.

Appendix C

Interview Questions by Michael Torsiello to Dr. Cudmore, President Elect, Faculty Senate, Florida Tech

1. Would you introduce yourself and describe your title at the university?

2. What committees are you on?

3. How do you feel about using letter grades to evaluate a student's performance? Do you feel it's accurate and fair?

4. You mentioned on the survey I gave you that you believe Florida Tech should use a +- system. Could you explain that?

5. Would an A+ be a 4.0 or a 4.333?

6. Do you think the university will change the grading scale in the near future?

7. How do you try to make grading fair in your particular classes regarding assignments?

Appendix D

Interview by Tariq Al-Johani to Charlotte Young, Supervisor of the Registrar's Office, Florida Tech

T: *Would you describe your position?*

C: I'm supervisor of the Registrar's Office, and the Registrar's Office as you know is responsible for grading, transcripts, and students' academic records. We are responsible for setting up the class schedule; we are responsible for doing degree evaluations for students who are petitioning to graduate; we work on transfer credit evaluation for all the transfer students coming in, so that they'll know what courses can be used for their program here. Also, the catalog – we are responsible for printing the University Catalog. That's sort of it in a nutshell. A lot of work my office does.

T: *We talked about this before, I emailed you actually, I'm going to ask you again: the decision making process with respect to changing the GPA scale at the University – could you describe it?*

C: What would be the process? Ok, let me just talk about a couple of things: when you talk about the GPA scale – the GPA scale is a four point, is based on a four point system, and so what you really mean is the grading system, not the GPA scale, because we are based on a four point, and regardless of whether you have plus or minus or not, you are still on a four point grade scale. So what we are going to do is not call it zit we are going to call it grading system – because that's how the people in my profession would refer to it. "What is your grading system?" and ours is just a straight A, B, C, D, F, and then I, audit, and then that sort of thing, without the plus or minuses. Now, when I was – I was a registrar in Southern Oregon University before I came here six year ago, and we had converted, several years before I left, we converted to plus and minuses' grading system. So I'm familiar with both.

T: *What is some of the history behind why Florida Tech has the grading system that it has?*

C: Quite frankly I think it's because it's probably the most common universally. It is in the United States, you. But I would say, probably it's becoming, the plus and minuses, is becoming very prevalent, and many, many schools have it. But I think originally, just the straight A, B, C, D grading system was the most common, and so when Florida Tech originated fifty years ago, that's what they adopted. And there's never been any wide range support to change it. I know that it has come up, so before our meeting today I talked to the vice-provost, Dr. Fronk – because he's been here a long time – and I wanted to hear some history from him, so I wouldn't mislead you, and I figured there would be some information beneficial to our conversation, and he said, basically, that's it, every once in a while, in various groups of the faculty or the deans, it may be mentioned, since we have the option of plus-minus, if we would like to think of that, but there's never been any wide support for, and so it's never really been seriously discussed as far as I know to change it to plus-minus.

T: *What are the benefits and disadvantages of this kind of grading system?*

C: The benefits I think are, if you happen to be in the low end of, let's say, an A or a B, or any of that, regardless of where you are in that range of A, B, C, D, if you are in the low part of one of those then you benefit by having that general grade of A, B, C, or D. If you are in the high end of it, then you are still going to get an A, B, C, or D, and you are not going to benefit, your GPA may not benefit from those extra quality points, and what I wanted to show you – you've probably have seen our catalog. These are the number of quality points assigned to each grade, and here is Southern Oregon's catalog and this is their grading system so when you define it more specifically to minus and pluses you are dealing with 0.7, 0.3, and so you are able to be more specific in assigning a grade – you have to be more specific. It less subjective and more objective in how you are going to be defining grades within your class and you got to be very specific. And so, have you had numerical scores in your course exams and papers – that sort of things – then you are better able to, I think, to get real defined in how you are going to grade a student. It's a little bit more difficult for the teacher –

T: *Yes, for the teacher, but it's better for the student –*

C: Well, it's better for the student if you are doing well within your range, then you are going to get an extra bunch of quality points.

You mention here an A+, A+ is never used. You start with an A, then you go down to an A-.

T: *Some schools, the use A+, and then you get 4.3, but they cap it to a 4.*

C: That's a little more confusing. That's not as prevalent. You want to stick to a straight four point scale and not have it confusing and have those extra tenths of point up there. This is probably more common, when you do plus or minus, do it this way.

T: *Let's say the school decides to change the grading scale, what would be the logistical steps to make such a decision –*

C: First of all, you want to put in an inquiry or an appeal to the provost's office - that would be Dr. McCay. So, if somebody really wanted the institution to seriously think about it then that person or that group of people would then petition to him and say "would you please consider the institution doing this for whatever reasons." And then he would have – he would very likely want to have feedback from faculty and from the other administrators. He would probably take this to the Faculty Senate, the Undergraduate Curriculum Committee, the Graduate Council, the Deans, and various clubs, to review it, to give their feedback and opinions.

T: *The final decision would be made by?*

C: The provost, because he's our chief academic officer for the institution. Very likely he would be making the decision.

T: *Ok, let's talk about technical aspects: what manual labor would be involved in changing the system?*

C: Well, that's a good point, I thought about that: the programming in our database – because our database would have, we would have to put these new grades into the database, and they would have to be given values, of course, that go towards computing the GPA. So we would have to deal with that. I tell you one thing right now: entering grades manually, believe it or not, is what we still do here: enter grades manually, here at the Registrar's office. Once you start entering pluses and minuses manually, you got even more potential for human error. What we are proposing to do, probably within a year, is go to online grading, from the professors. Professors enter their own grades manually, because then they've got just a few to do, and they would be the point of entry. If we did plus or minus or not, then it's not as likely for errors, if they are doing their own. And I'd really like my office away from handling all the grades. The other way of doing it is optical scan of – Scantron – they do that for, I think, the student surveys of the classes and the professors – they do that on scanned forms. A lot of schools do grades that way, but it take a whole other set of technology to read that into your database, and we thought, want we want to do is go directly to online grades. So the faculty have their own PAWS account – right now they can go in and see their students and their PAWS accounts, they can see all their own rosters in PAWS. The next step is going into their PAWS account and then entering grades on their classes. Then it will be much easier than us entering, you know –

T: *Do you know how much time or money –*

C: You know, it's hard to say, there could be things – because I have not looked into this deeply, I'm not sure exactly how much time it would take to program – it could not take very much time at all. This is more philosophical change than a labor variable. It's more the philosophical and the academic question on how you want to grade the students – that is the hard part of this whole issue. You are going to have people on both sides feel very differently about it.

T: *Would university employees have to put in much time to implement this system, you don't think so?*

C: No, I mean, we already work over-time during grade week – we are already working over-time to get everything done we need to before the holidays. This makes really no difference on what we ought to do – this particular thing would probably not make any difference.

T: *Financially?*

C: Probably not a financial issue, I doubt it, I doubt it. Can't think of what it would be. We have to make sure there are enough fields on the transcript to handle a plus or minus [laughs] – you know what I mean? And I think the transcripts would handle it fine because, I said, there are other schools that are doing this. They do all their program, make sure it's all going to fit on the transcript – it's a very flexible transcript program that

we have and I'm sure that would not be a problem. That, I just thought of that, it's another field to take care of the plus or minus. I'm sure that would be fine.

T: *Would the Registrar's Office be in charge of informing students of the change?*

C: It would be the provost's office, I'm sure, and we've got ways of informing students of changes to our policies, the procedures – we probably would send e-mails out, we probably would send memos out, we would make changes in the catalog – there would be a way to inform everybody.

T: *Yes, because new students would see the catalog but current students no.*

C: True, and you remember when we made changes to the Deans' list? Honors are different this fall, and then graduation honors are going to change in the Fall 2006, and both of those I had sent out numerous emails and hard copy memos and had been notifying students for two years about that – we like to give plenty of leetime so students are made aware of what the changes will be and – we would give them plenty of time.

T: *So, such a change wouldn't happen –*

C: It wouldn't happen right away, we would have a notification period [inaudible] with the next catalog 2007 – 2008, 2006 – 2007, believe it or not, is ready to go to print, so the next one we would be working on would be 2007 – 2008. You work way in advance, because you've got to give students plenty of notification on this sort of things.

T: *The school never changed the system, right?*

C: This is the way it has always been, we started out with this system here.

T: *I know other schools – I researched – especially tech schools, nobody uses this –*

C: Nowhere? I think, there are quite a few that do.

T: *Do you know any school –*

C: That don't have plus and minuses? I would have to look at their transcripts; probably my transcript evaluator would know that. But, there may be a majority that are using plus and minuses, but I would say, there are lots and lots of schools that –

T: *Yes, I wanted to know your own opinion –*

C: Would I like to do that, oh. [laughing] As long as my office doesn't have to hand enter the pluses and the minuses – oh, that would be very difficult, and I know what that's like. If we can have instructors entering them online, there's no mechanical or technical reason why not, because we have a database that can handle it, it's really a philosophical and academic issue, and I see reasons for both sides, so I don't feel strongly one way or the other, I really don't.

T: *You've had this experience before, how did you handle it?*

C: We handled it, you know, you just do it – you make it work. Because if the faculty and the administration and the provost feel [interrupted].

It's very easy to handle it; you have a database which is flexible. So my own personal opinion really is not that important, because I believe that both systems can work to the advantage of certain students – this is going to be better for some, this is going to be more advantageous for others. It depends on what range of the scale you are on. I would be very interested to hear what our faculty would have to say about – and I think there are going to be some that will support it and some that won't.

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