

University of Minnesota Morris Digital Well

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Finance Committee

Campus Governance

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11-19-2020

### Finance minutes 11/19/2020

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# UMM FINANCE COMMITTEE MINUTES

11-19-20 (via Zoom)

Members Present: Brad Deane, Roger Rose, Kara Nell, Jon Anderson, Bart Finzel, Naomi Skulan, Bryan Herrmann, Shelby Maloney, Cole Maxwell

Members absent: Peh Ng

Member Positions Unfilled: USA Position, USA Position

Others Present: Jessica Broekemeier, Melissa Wrobleski

## Agenda:

### **I. Approval of Minutes**

The minutes were approved with no opposition.

### **II. Jon's presentation on retention projections and enrollment modeling**

Jon reviewed his presentation and used various graphs and charts to explain the retention projections.

#### Predictive Distribution Graph

Jon noted that the context behind this graph is to use the previous year's 1<sup>st</sup> year retention fraction as a projection for what may happen next year. The middle of this curve is last year's prediction. There is a vertical bar on this graph projects slightly under what last year's percentage was to possibly systematically underestimate slightly under. Sometimes you could overestimate or underestimate the students using this prediction. The question is if one of these errors may be more serious to the institution than the other error.

#### Prediction Performance Table

This chart shows the past year's retention data using the predictive distribution graph. A positive error implies an under-estimate of students, creating a budget surplus. A negative error implies an over-estimate of students, creating a budget deficit. Jon noted that these errors transfer over to real dollars and that we would look at how much each student is roughly worth in terms of tuition. He proposed that this could be a slight strategy to implement if it is true that a deficit is more difficult than a surplus. Bryan said that a surplus is much better, but the challenge is that it's more complicated because we have to submit a balanced budget. He noted that if we

underestimate we have to cut more at the start. He concluded that we want to budget conservatively but not too conservative as we need to have some optimism in the number. Jon said that this idea is easily programmable to an amount of change the Finance Office is comfortable with.

He asked if the Finance Committee would like to pursue this more. Brad said that he'd like to talk about this more. He said that this reminded him of a conversation that was had years ago when the committee would pick a figure for predicting next year's enrollment. Brad didn't think that we've seen on our campus a will to make cuts before they are necessary. He wondered if it was worthwhile if making a cultural change to be more conservative and make cuts before needed. Jon added that you can either make cuts at the beginning or end of the year. He thought there should be discussions on the advantages or disadvantages on paying the price up front or at the end. Jon asked Bryan if it mattered in terms of politics or operational efficiency for these cuts to happen before or after the fact. Bryan said that if we were in a financial position that we didn't have the size of cuts we need to make we'd be more comfortable being more conservative. Roger thought that this is a really good conversation for long term thinking and if we can get back to a more normal routine year to year. He noted that we've been missing the mark but this year was very different with the pandemic and an Admissions change. Roger added that thinking about retention over the short term is important but will be hard to estimate as there are a lot of factors in the near future that will affect this. Bart said that we would be conservatively estimating revenue but are not factoring in that we rarely spend what we have budgeted. He noted there would have to be some adjustment on the expenditure side as well if we want to move towards a more realistic budget scenario. He concluded that we have a contingency where the risk should be absorbed.

Bryan showed the committee the Enrollment Projections on Retention Model spreadsheet to review the retention numbers. He said that in terms of retention our estimates are pretty close. The challenge is that we had much less new and transfer students than budgeted. Jon said that this prediction model could calibrate the degree of how optimistic or pessimistic a prediction is rather than if it is just optimistic or pessimistic. Bryan said he is open to this idea and added that the bottom line is that central will look at the total students. Brad said that the bigger issue is what the Twin Cities will think

about our budget and that their attitude toward us is worth a lot. He asked Bryan if he thought we'd look better when we overpromise and underperform or under promise and over perform. Bryan said that it would look better if we were off a bit due to being overenrolled but that we haven't been in that position. We want to try to be as close as we can with reasonable confidence. Roger said that he'd like to know what is going on in admissions as new student and transfer enrollment is very important. He said that it may be worth our time to hear from the new person in Admissions to find out what our plan is. Brad agreed and said he'd like to schedule a meeting at least with Melissa Bert to see what our strategic enrollment management has done.

### Retention Model Performance Overview

Jon reviewed this graph that shows how the prediction model looks at this point. The blue dots are the people who were not retained and the orange dots people who stayed for the next year. The horizontal axis is the model prediction. Jon noted that there is a vertical shifting between the blue dots and the orange dots. The orange dots have a higher probability in the model of staying than the blue dots. The predictors that were used for this model include: gender, where they are from, ethnic group, how many U of M credits were brought in when the student enrolled, how many credits (not from the U of M) were transferred in, if they have an ACT score, what is their ACT score, what academic program was the student interested in, entry registration status (new or transfer), entry load (part or full time), credit load, and the total number of credits they brought in. Bryan asked about the ACT flag as some will only have an SAT flag. Jon said that if the student only had an SAT score that he did a mathematical equation to get their ACT score. Bryan added that International students and transfer students wouldn't have an ACT score.

Jon said that in the model building there were some predictors that showed to be more important than others. The most important predictors were the total number of credits the student brought in, ACT score, credit load in the first semester, and U of M credits transferred in. Other predictors such as ethnicity, gender, where they are from, and what their major interest was were not nearly as important.

### Total Entry Credits Graph

Jon explained this graph. The horizontal axis is how many credits the student brought in. The vertical axis is the model probability of staying. The orange and blue dots represent who stayed and who left. The blue line shows the prediction of the percentage of students who stay. Students who bring in 0 credits have about a 70% chance of staying. Students who brought in more than 0 credits had about a 5% higher chance of staying.

### ACT Scores Graph

Jon said there are a bunch of zeros and it doesn't mean that it's a real zero, just that the students don't have a score on record. He noted that there is a pretty strong pattern that higher ACT scores have a much higher probability of staying. Bryan said that there are still a significant number of blue dots below the prediction line that have higher ACT scores.

### Home Region

Jon said this shows the breakdown of where students are from. This includes: Minnesota (broken up), Wisconsin, North Dakota, South Dakota, the rest of the United States and International. He said if a student is from the upper Midwest there is a high predictability that the student will stay. One thing to note from this is that Chinese students are staying at a much lower rate than others. The Twin Cities areas include the surrounding areas while Hennepin/Ramsey counties are the Twin Cities. Jon noted that the predictions of these two are pretty similar to each other. Morris area is Stevens County and any county that touches Stevens County. St. Cloud is Stearns County and any county that touches Stearns County. Bart said that there has been some evidence that students may be retained when they are within 100 miles from home and said he'd love to see these numbers on actual distance from campus. Jon said that these are broken up by section and can see that the farther away from campus the probability seems to be more modest.

### Academic Program upon Entry

Jon said that it is interesting to see the fact that people who are putting down their academic program interests have a higher probability of staying. He noted one exception was Music. Jon said that Economics is lower as well and could be more driven by the fact that there are more Chinese students.

### Ethnicity Students

Jon said that the most surprising here is how different the Hispanic ethnicity relates to other ethnicities.

### Sex

Jon noted that it is pretty clear that female students retain better than male students.

Jon said that another interesting predictor to look up is the number of credits a student signs up for in the first semester, noting that there is a sweet spot in the middle. He said if a student signs up for a low amount of credits there is a probability the student won't be retained, and if a student takes 18+ credits the probability the student stays as well is lower. He said one theory is that if a student doesn't sign up for many credits they may be under confident with their abilities and if a student signed up for too many credits they may be over confident and get a rude awakening. Roger added that small amounts of credit may also reflect financial vulnerability. Jon agreed that what the student signs up for and how much the student signs up for is reflective on underlining situations for the student.

Bryan asked if this data was captured at the true sign up or after the semester has begun. Jon said that this data was from Kristen and that the data would have to be after the 10 day count when the campus grabs the credit information.

Brad asked how much our campus relates to the national trends, noting that ACT scores are one of the most prominent predictors nationally. Jon said our campus behaves largely like we are expected to and are similar to the national trends. He added that our sex and ACT trends are consistent nationally. Jon noted that our physical location would be more particular to us but said our rural students retention isn't notably different than metropolitan students. Roger said that there are different stories behind each group. Bryan added that ACT test scores nationally have a lot to do with if a student's parent speaks English, if they have a bachelor's degree and how much money they make. He added that there may be a dramatic shift in the near future with institutions going away from ACT scores. Brad asked if our campus requires the writing portion of the ACT/SAT scores. Bryan said we recommend it but it's not required. Brad noted that on the Princeton Review page it shows that

our campus requires it. Bryan said we say we require it because we can't say we just recommend it.

Brad asked Jon if this prediction process is currently actionable. Jon said that there still needs to be a better sense of how this performs. We wouldn't want to use this information currently. He added that by next semester there will be a much better idea about what parts we should pay attention to.

Brad reminded the Finance Committee to be looking into announcements on news pages and where to find things for us to consider. Jon said that if people had information they could give a report on, to add it in the Google Drive folder over break. Brad agreed that this was a great idea and that he will create a folder for this information.

The meeting was adjourned.