

Oregon Council of Presidents



December 4, 2020

On behalf of Oregon's seven Public Universities, please find attached the SSCM letters that were submitted to the HECC for the November 12, 2020 full Commission meeting.



Office of the President

November 10, 2020

Ben Cannon
Executive Director
Higher Education Coordinating Commission
3225 25th Street SE
Salem, OR 97302

Dear Ben,

My primary objection to the current proposal is the significant change in funding that supports the unique mission of Eastern Oregon University. For decades, the State of Oregon has designated enhanced investment in EOU's mission of providing access to higher education for rural students. Shifting mission critical funding without adequate conversation about the history of this mission, the students served by this funding, and how it impacts statewide priorities, is not prudent.

This proposal represents a major policy shift that has been in place for many decades for EOU to support rural access to higher education for students in the eastern part of Oregon. I am eager to engage in conversation about how we all may serve students better, and if part of that is reevaluating the value of targeted investment in rural access, we should indeed have that conversation. But to make a change of this magnitude and with this significant impact to students in our region today, which is among the fastest growing in diversity in the state, is short-sighted and sends a clear message to the students and people in Eastern Oregon that their education is not important.

In addition to the policy concerns, there are technical concerns that also have serious implications to EOU and other universities. We have shared the outlined concerns below with the HECC:

- Adverse Impact on Stability: Significant changes are being proposed at a time of continued uncertainty in our economy and without adequate information or modeling on other potential policy and budget changes that could occur in the next legislative session.
- Other Program Add-backs: How will that funding occur? We understand there are commitments to fund some programs that currently are not included in the proposed model. To date, we have not seen any codification of how these programs will be funded, nor a model that shows the overall impact of this to the other universities.

- Implementation Timeline: There is no definitive language around how the model changes will be phased in. For some universities, including EOU, the proposed changes have a significant adverse impact and it's unclear when and how the redistribution would occur.
- Mission Differential: In a downside funding scenario, changes in the MD portion to the SSCM have a disproportionate impact on the technical and regional universities. In an upside scenario, the MD only grows at "lessor of inflation or the overall growth in the SSCM." For the TRU campuses that rely on the MD funding significantly, they are negatively impacted in a downside scenario, and there is then no mechanism for those campuses to catch up in funding in an upside scenario.

EOU has served students for over 90 years and has been designated by the legislature as Oregon's Rural University, an identity that embodies everything we do. In the recent past, EOU experienced a number of financial challenges but after five years of prudent management and making difficult choices, EOU has made significant progress in maintaining financial stability while better serving our region and students. EOU has grown access and essentially eliminated the attainment gap for our culturally and ethnically diverse population. We have focused on improving access to both traditional and adult students who seek access to education and the opportunities that a university education at EOU provides. In fact, 62 percent of our students are rural and nearly 30 percent are culturally and ethnically diverse—underserved populations that are a priority for the state.

As we have stated throughout this process, EOU remains committed to a principles-based approach to these discussions. Changes to a funding model that mark a shift in policy priority for the state and impact students directly, and our ability to serve them, deserves a more deliberate and public discussion.

Sincerely,



Thomas A. Insko
President

cc: David Rives, Chair
cc: Duncan Wyse, Chair, Funding and Achievement Committee



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11/05/20

Ben Cannon
Executive Director
Higher Education Coordinating Commission
3225 25th Street NE
Salem, OR 97302

Dear Ben,

Oregon State University comments on SSCM Review and Recommendations Report

OSU appreciates the work of HECC staff, the members of the workgroup, and the various external groups who contributed to the year-long development of the recommendations for changes to the SSCM. We know it is difficult to find a path that addresses the unique challenges and missions of each of Oregon's seven public universities given the diversity among them and the need to serve multiple state objectives. The central difficulty that the workgroup faced was that the total amount of funding in the Public University Support fund is insufficient to the competing demands of affordability, closing achievement gaps, providing regional access, maintaining quality programs, and promoting economic and social prosperity. In the absence of the state committing to a greater share of the cost of public higher education there will be compromises and shortcomings in any distribution approach for the PUSF.

OSU Produces Substantial Results for Oregon

- ***Access to a College Education for Oregonians.*** OSU enrolled more Oregon resident FTE than any other university in the state in 2019-20: 15,716 Oregonians. In total, Oregon's three largest universities enroll 81% of resident FTE.
- ***Student Demand and Value.*** More and more Oregon students value an OSU degree. From 2011-12 through 2018-19, OSU grew degrees awarded to residents (all levels) by 14%, or 566 degrees a year. Only OIT also grew over that period. OSU also has the second highest ranking in average monthly earnings and second highest ranking in average net earnings which takes into account lower student debt. Yet OSU produces these outcomes while ranking 5th among the seven universities in per student funding from the PUSF (via current SSCM).
- ***Skilled Oregon Workforce.*** OSU has built the 10th largest undergraduate engineering program in the US, directly in response to the state's prioritization of engineering and STEM fields as priorities for the Oregon workforce. In fact, OSU enrolls 46% of all STEM students in Oregon's four-year universities. And, again, it has done so while already receiving among the lowest per-student funding in the state.
- ***Access and Diversity.*** OSU has placed a high priority on ensuring broad access to STEM degrees for women and students of color, by building a diverse faculty to serve as teachers and mentors. OSU's College of Engineering ranks number 3 nationally among the nation's highly research-intensive universities in the percentage of engineering faculty who are women. Among Pell Grant recipient students, OSU ranks second in the state with 26% of the state's university total

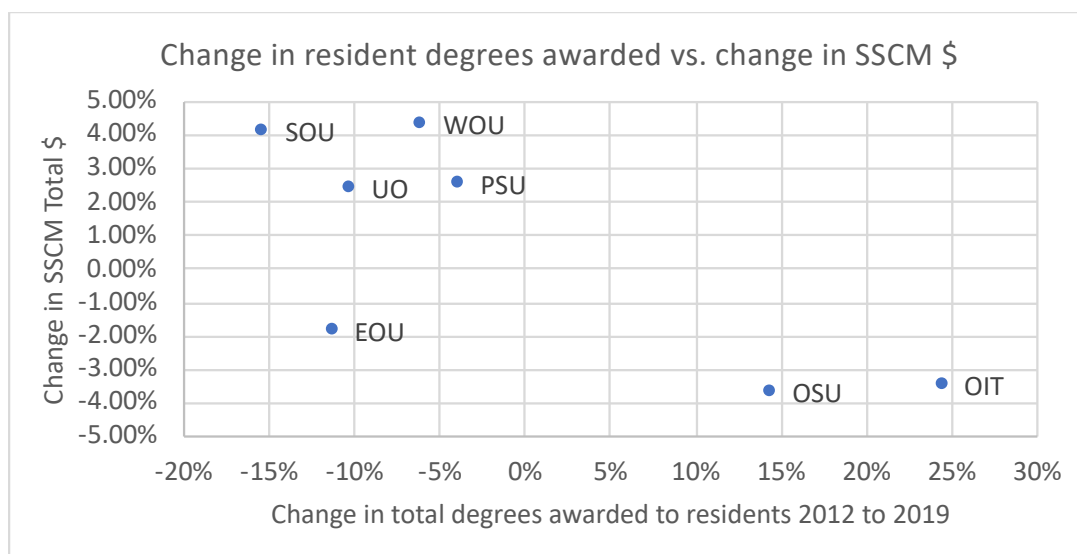
and second in the number of Pell Grant recipient graduates or 27% of the state total. OSU also ranks second in the state for enrolling community college transfer students (26%) and second in enrolling rural freshmen students or 34% of the state's total.

- **Innovation in Education.** OSU established its Ecampus (online) program *18 years ago* to create more pathways for students and adult learners for whom traditional campus study is infeasible. *U.S. News & World Report* has ranked OSU's Ecampus undergraduate programs among the top five in the nation for six years running, a ranking based on quality and student outcomes. OSU's Cascades campus is also becoming a model for delivering high quality degrees and supporting innovation and economic development in its surrounding region while drawing on the specialized resources of the Corvallis main campus.
- **Leveraging Oregon Innovation and Growth.** In FY18, OSU brought \$171.8M in federal research spending to the State of Oregon, 62% of the total for the seven public universities. Those expenditures support high-paying, stable jobs, most of them in STEM fields. The research work fuels economic growth by establishing new entrepreneurial companies and industries, like NuScale Power.

Observations on the recommended changes to the SSCM:

Oregon State accepts the merits of reasonable modifications to the SSCM that improve how the model accounts for changing costs-of-delivery among disciplines and the weighting of outcomes. We know that those adjustments will have the effect of reducing OSU's allocation and thus its per student funding level (already 5th out of 7 universities). We point out that OSU's allocation will *decline* under the revised model even though it is a) the public university serving the most Oregon students; b) one of only two public universities in which degrees earned by Oregon students have been *increasing* since 2011-12. Nevertheless, OSU understands the value of adjustments that improve the technical integrity of the model. We do have some observations and concerns about the long-term impact of some of the changes.

- The SSCM has been successful, as noted in the report, because it committed to a majority of funding being driven by outcomes. OSU fully supports that and hopes it will continue to be the focus of the model. The redistribution of SSCM funding that results from the report recommendations is, however, inversely correlated with recent trends in outcomes:



We understand the many variables that were adjusted in the recommended SSCM changes and that simplifying mission differentiation was a challenge given the many years of incremental commitments there. We do assume that this redistribution comes with the expectation that improving outcomes remains the focus for all of Oregon's public universities.

- OSU supports the technical changes made in weights, area of study bonuses, and definitions of STEM fields, but notes that the aggregate effect of that is a very substantial reduction in the funding per STEM degree (12% for engineering for example, based on the example on slide 27 and excluding equity). The STEM disciplines are expensive to deliver and many, engineering particularly, include differential tuition as part of the tuition structure. We are concerned that the low overall level of state funding and the reduction in funding for these high-cost programs raises the risk of limiting access. If tuition rates increase or differential tuition is added to programs to maintain funding at the level required for a high-quality education in those disciplines, they could become more difficult to access for students of lesser economic means. It is something that bears watching as the new SSCM is implemented.
- We are concerned about the discounting of graduate degree cost-weights by 40% as a long-term policy. The updating of the cost weights has been one of the commission's priorities in revising the SSCM and we believe an objective set of weights is an essential part of the SSCM. We respect the commission's statement on prioritizing undergraduate degrees, given the low level of state funding, but hope the commitment is to secure levels of funding that allow the real cost of those programs to be recognized at some point. Graduate degrees like the MBA, Masters of Engineering, Masters of Public Health, as well as the PharmD and DVM are important credentials for many Oregon students. The ability to access affordable, high-quality graduate education will be increasingly important for Oregon's economy and competitiveness. Funding graduate education is a key part of a long-term economic strategy for the state and we will advocate for a larger allocation of the PUSF to that area as state funding improves.
- We appreciate the commitment to funding OSU-Cascades as a regional campus by a formula consistent with the other regional campuses. OSU-Cascades is an important part of providing access to affordable higher education in Oregon's fastest growing region.
- OSU is very supportive of retaining a research allocation in the mission differentiation formula as this is a major part of OSU's mission. However, as a category in the PUSF, research funding only accounts for 6% of the Mission Differentiation funding while the "regional" and "base funding" categories account for 70% of Mission Differentiation. This is considerably lower than the vast majority of other states and represents a statewide devaluation of the economic and societal impact of high quality and nationally competitive university research. Research is not only a direct economic benefit to Oregon because of federal funding, but is important in building a thriving economy fueled by regular new discoveries and a vibrant start-up culture. Research also provides opportunities for experiential learning for both undergraduate and graduate students that are some of the most impactful to student success after graduation. As state funding improves (eventually) this is an area where we will advocate for a larger allocation of the PUSF.
- Public service is the third key part of OSU's mission and we support the specific allocation for public service in the proposed mission differentiation formula. Public service provides opportunities for experiential and service learning for students and is deeply rooted in OSU's programs in agriculture, forestry, public health, education, and others. We should note that OSU is also funded by the state to manage the Statewide Public Services (the Agricultural Experiment Station, the Forest Research Laboratory, and the Extension Service) as well as Outdoor School. Those funds are specifically for public service or research in support of K-12 education and specific Oregon economic and social goals. Those funds cannot support OSU's educational mission.
- OSU's principal area of concern is that the aggregate changes reduce the funding for OSU-Corvallis by \$5.6M, largely from a \$5.0M reduction in the mission differentiation allowance. This effectively eliminates funding for OSU's long-standing commitment to support the Veterinary Diagnostic Laboratory (VDL, which has been instrumental in OSU's work in coronavirus testing) and facilities for the Statewide Public Services (SWPS) as part of our service to the state.

Both of those priorities—stated commitments of the Oregon legislature—have been funded through the PUSF allocation since the dissolution of the Oregon University System. The Veterinary Diagnostic Laboratory provides testing and diagnostic services throughout the state and most recently has been an essential part of Oregon's testing for coronavirus. The Statewide Public Services facilities support underwrites the costs of facilities on the Corvallis campus used by SWPS faculty and staff so that those costs do not fall on student tuition dollars.

Originally, the VDL and the SWPS facilities support were provided as one of several line items in the Oregon University System (OUS) budget. Both line items were folded subsequently into the mission differentiation component of the SSCM (while other such line items were moved to State Programs Funding). These two items are funded at \$6.9 million in the current 2019-21 biennial budget. OSU agrees that the VDL and SWPS facilities do not align with the intent of the PUSF as framed today. Yet they should also not be funded by tuition dollars, which would be necessary if they are zeroed out by the proposed changes and not replaced with another source. The fact remains that the state intended those dollars for specific uses and that fact must be acknowledged as a part of any change to the SSCM approved by the Commission.

Therefore, OSU's support of the proposed SSCM revisions is dependent on the Commission finding an alternative funding mechanism to replace the allocations for the VDL and SWPS facilities support.

- OSU is in favor of phasing these changes in over two biennia using an appropriate stop-loss/stop-gain mechanism, much as was used in the original implementation of the SSCM. This is particularly important given the anticipated reduction in state funding for the PUSF anticipated for the 2021-2023 biennium.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael J. Green", with a horizontal line extending to the right.

Michael J. Green
Vice President for Finance and Administration / Chief Financial Officer

Office of the President

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November 5, 2020

David Rives, Chair
Higher Education Coordinating Commission (via email)
Salem, OR 97301

Dear Chair Rives and Commissioners:

On behalf of the nearly 35,000 students, faculty, and staff that make up our vibrant, diverse Portland State University community, I write in support of the proposed updates to the Student Success and Completion Model (SSCM). The HECC staff proposal better aligns the SSCM with the Commission's commitment to equity, access, and affordability for Oregon's public university students. I am grateful for the stronger correlation between state funding and our collective commitment to ending historic racial disparities in higher education while maintaining access to a university degree in every corner of our state.

The most fundamental change is the inclusion of base Mission Differentiation funding for each university. It is a change that acknowledges the uniqueness of each university and the students and communities they serve. For PSU, this is extremely important as it recognizes our critical role in educating low-income students and students of color. Other impactful changes are also incorporated into the proposal, including increasing funding for both transfer and underrepresented students. Collectively, these changes will improve funding and outcomes for the thousands of Oregonians PSU serves.

It is important to note that while these changes reduce the funding disparities between the highest funded institutions and lowest funded institutions, significant gaps persist. Even after these updates, PSU continues to receive the lowest funding per FTE. PSU also has the second-lowest tuition and fees. These two sources represent the vast majority of PSU's general fund revenue. The result is a profound disparity that is felt every day by our students, faculty, and staff. No other university in Oregon serves as many transfer students, students of color, or low-income Oregonians, and we are asked to do so with the lowest overall tuition revenue and state funds per resident student.

The proposal begins to erode this historic and persistent gap and merits the support of the Commission. We offer our thanks to the HECC staff and are grateful for the time, energy, and expertise required to reach this point. It was difficult work, but important. We commit to continuing to work with the commission to grow state funding for all institutions and to explore future modifications to the formula that promote access to a university degree and address the deeply embedded and unacceptable inequities faced by our students of color.

Thank you for your time and consideration.

Sincerely,



Stephen Percy
PSU President

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Oregon Institute of Technology
OFFICE OF THE PRESIDENT

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November 6, 2020

Ben Cannon
Executive Director
Higher Education Coordinating Commission
3225 25th Street NE
Salem, OR 97302

Dear Ben,

Re.: Oregon Tech's comments on SSCM Review and Recommendations Report

Oregon Tech is very appreciative of the many hours of work from HECC staff and workgroup members that went into the proposed SSCM recommendations, and in particular, we want to recognize the special efforts of Commissioner Wyse. I understand that it has been repeated many times by the Commissioners that designing and implementing the SSCM is "the most important work" that the HECC does. I think we all agree that with work of such importance comes the responsibility for all of us to understand the downstream impacts of decisions, work through hard tradeoffs, and not leave certain decisions for the next phase.

Unfortunately, at this juncture, Oregon Tech has serious reservations about the incompleteness of the proposed SSCM recommendations and the embedded policy disconnects. While we have amplified on certain topics of concern in the following pages, we wish to propose specific action steps to support a decision making process in line with past HECC practice and that is clearer for all stakeholders. We believe that these action steps should be studied and answered before moving to rulemaking. *Therefore, we request at least a one-month pause to do this work so that staff can return with a complete set of SSCM recommendations and related analysis.*

Oregon Tech is proposing the following four action steps.

1. **Adjust the increase/decrease function for Mission Differentiation** so that it eliminates the existing one-sided ratchet that permanently disadvantages those institutions who are most reliant on and responsive to state funding;
2. **Provide clear recommendations on a phased-in approach and a specific mechanism such as a stop-loss/stop-gain system** that is gradual, predictable, and responsive to different state budget circumstances;
3. **Retain the existing Dual Credit funding system** -- this could be embedded within Mission Differentiation or within the Activities section of the SSCM, with a structured funding per credit hour rate at or near the current level to sustain these critical programs that save Oregon families tens, if not hundreds of thousands of dollars a year; and
4. **Develop and distribute a multi-biennial funding model tool**, similar to those that have been provided during previous funding model development efforts, allowing the Commission and universities to understand the full implication of such a critical policy decision.

Rationale:

During the last three major formula development processes, the HECC has pursued a strategy that works – drive the development process through principles grounded in the outcomes it wishes to see for students, fully develop and answer the policy as well as the technical questions embedded in a functioning analytical model, move into the rulemaking process, and finally adopt the rule. The process being advanced now moves away from this tried and true process into uncharted territory.

When dealing with hundreds of millions of dollars in state funding, in the middle of a global public health crisis, social unrest across the state, a major recession, and state budget shortfalls forecast to stretch for multiple biennia, requiring the universities to navigate additional instability will not help Oregon students.

Before moving the process to rulemaking, it is important to note that there are major policy decisions which are yet to be vetted as well as incomplete technical work in the proposed SSCM recommendations which will impact the future of Oregon's public universities and their students. By moving forward with an incomplete understanding of the implications of funding policy changes, we believe the HECC would not be exercising its basic duty of care. For that reason, we recommend at least a one-month delay in decision making, to get this done right.

Areas of Concern:

Oregon Tech has been and will continue to be a strong proponent of outcomes-based funding. We believe that institutions and any entity that is a steward of public funds and the public trust should be judged and rewarded based on their effectiveness. Clearly linking outcomes to funding – in this case student completions – aligns the interest of the institutions with the interests of students and our state. The current SSCM has been effective in this regard as highlighted in Staff's presentation.

To be clear, Oregon Tech, despite seeing reductions in the proposal on the table, would like to be supportive of a revision. However, there are too many unknowns in how the revision is designed and proposed to be implemented. Implementation matters. What happens in up-cycles matters. What happens in down-cycles matter, probably even more. And we are definitely moving into a down-cycle.

We recognize the difficulty of predicting the impact of state funding changes and a revision to the SSCM, but it can be modeled. The resulting impact of a revision could be more dramatic when facing multi-biennial budget shortfalls at the state. In turn, this increases the burden for the Commission to analyze and understand the impact of the revision more thoroughly. With the tools at its disposal currently, this cannot be done.

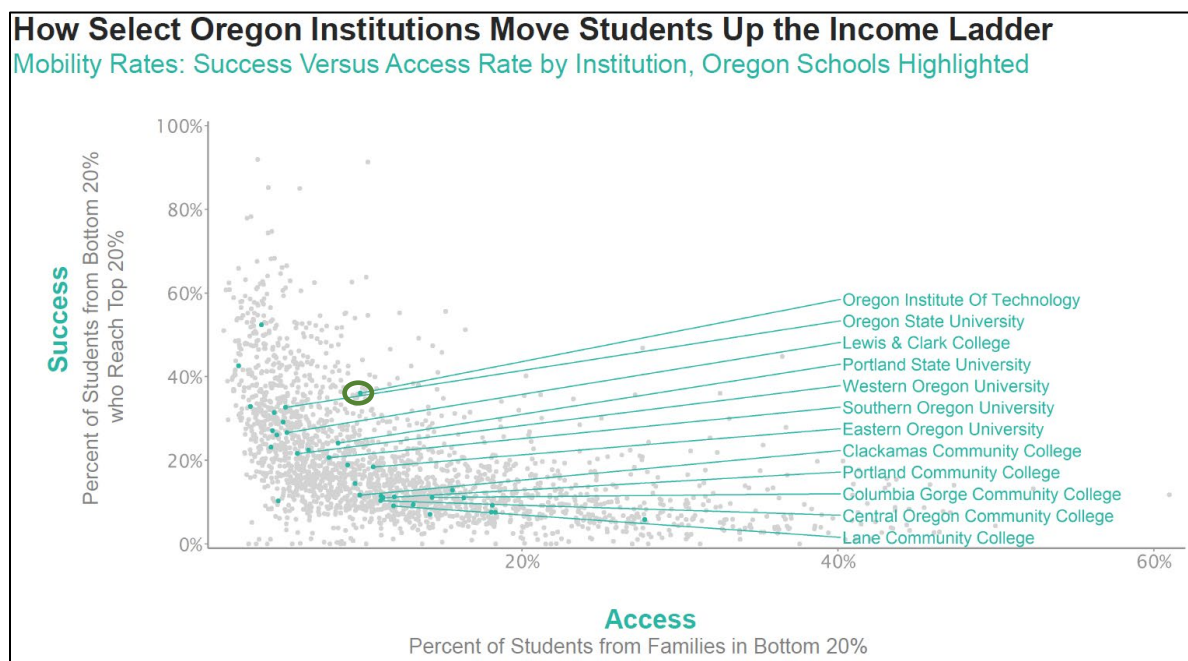
Oregon Tech believes strongly that the staff report being presented to the Commission does not adequately address key areas of concern. This could result in unintended consequences, counter to the interest of the state. The concerns can be grouped into three categories: Funding policy, Implementation, and Due diligence/impact and are outlined below.

Funding Policy

- The current SSCM funding formula utilizes multiple, independent bonus systems to incentivize degrees in areas of focus and importance for the state and historically underrepresented student populations. As shown in the staff's report, the current formula has clearly promoted the growth of STEM degrees. Oregon Tech is supportive of the proposed STEM and Health CIP definition changes because they link to a federal definition and are grounded in national labor market needs. However, we are concerned with the restructuring of STEM bonuses from "multiplicative"

(normalizing incentives for different programs based on their actual cost of delivery) to “additive” (one-size fits all). ***This reduces the STEM bonus by 40% overall and reduces the STEM bonus to Oregon Tech by 70%.*** This does not make sense if the HECC wishes promote equity by increasing intergenerational economic mobility for the most disadvantaged Oregonians. Instead it will promote mission dilution and will encourage universities to step away from high-cost and high-demand programs to those programs with greater margins but that offer much less long-term value to Oregon students.

- We all agree that the total amount of funding available in the PUSF is insufficient and we also know that STEM and Health programs are more expensive and capital intensive. By reducing funding for these programs so dramatically, the impact will be higher tuition and less access for students. ***Decreasing funding for STEM and Healthcare programs will directly counter HECC's Equity Lens and negatively impact intergenerational economic mobility of BIPOC, low-income, and first-generation students.*** It is concerning that a policy recommendation of the Commission would disproportionately impact an institution like Oregon Tech who is an outlier in terms of fostering economic mobility for our students according to the HECC's own research (see slide from the October 2019 Opportunity Insights report to the Commission below).



- Oregon Tech is supportive of shifting the Statewide Public Services Maintenance (SWPS) and Veterinary Diagnostic Lab (VDL) at Oregon State University from the PUSF to State Programs. It is our understanding that as a part of adoption of these recommendations, or separately through staff, the HECC has already endorsed or will endorse such an action. We believe this creates additional clarity in the funding model and properly shifts what are, in essence, state programs to State Programs funding. However, we are highly concerned that the limited financial modeling available to the Commission and to the universities assumes that the approximately 3.5 million dollars currently allocated to these programs would be redistributed through the SSCM. It is disingenuous to not account for this shift in its modeling of SSCM changes, if the HECC is indeed supporting it. If the HECC does not support this one-for-one swap it should clearly articulate that. ***The assumption that SWPS and VDL dollars will be redistributed through SSCM artificially inflates the funding for all institutions in the available modeling and does not provide an accurate or clear picture of the actual impact of proposed changes.*** If the funding is not redistributed through SSCM, each TRU would likely see \$100K-\$200K less

funding per year and the larger universities may see a \$600K-\$900K reduction per year. This is material in nature and is not reflected in the limited financial modeling available.

- Shifting specific funding for Dual Credit programs from Mission Differentiation at approximately \$50-\$55 per credit hour to the Activities portion of the funding model at approximately \$20-\$25 per credit hour will have a profoundly negative impact on Oregon's K-12 students when they can least afford it. Dual Credit funding was structured the way it is today to level the playing field between universities and community colleges and keep these critical programs viable. Oregon Tech has built a considerable dual credit program focused on STEM and Health programs in high schools across the state, in many cases focusing on low- and moderate-income communities. This program breaks even at best and only because it is supported by the guaranteed credit hour funding that exists today. ***Eliminating the existing funding stream for Dual Credit programs and reducing the total funding for these critical access programs would make these programs unsustainable for most universities, and certainly, for Oregon Tech.***

Our Dual Credit program provides opportunities for nearly 1,300 students to take college-level courses in rigorous fields each academic term while they are in high school, thus proving to themselves and to their families they are capable of being successful in college. Whether these students go on to attend Oregon Tech or not, we know that the students' experiences in our dual-credit programs do make them feel confident that they can and will succeed in college.

As an example, we tracked 1,839 Oregon Tech dual-credit students from the 2015-16 academic year through the clearing house. Of these students, all but 154 went on to attend two- or four-year colleges. Importantly, 82% of them went to two- and four-year institutions in Oregon. That is a success story not just for the students, but also for their families and Oregon. ***Many of the students participating in Dual Credit come from low-income and under-represented communities. If the funding model is amended as proposed, these deserving students will lose this success pathway.*** Again, this is directly counter to the HECC's Equity Lens and negatively impacts access and attainment of BIPOC, low-income, and first-generation students.

- The current recommendation includes the following mechanism for changes in Mission Differentiation funding levels, which is consistent with the current rule: "[Mission Differentiation] will continue to grow by the lesser of inflation or the growth in the overall funding for the PUSF." HECC Staff has consistently stated that the current formula provides some downside protection because of how Mission Differentiation is structured within the model. This one-sided ratchet has never been tested before as the PUSF has grown every year since implementation. This growth is unlikely to continue next biennium and in future biennia. For the four institutions who are most reliant on state funding – Eastern Oregon, Oregon Tech, Southern Oregon, and Western Oregon – this structure will create disproportional losses when stability is needed most. The table shows the impact of the changes in SSCM funding on the TRUs and other universities. The numbers are based on HECC data and the existing SSCM model (shared in April). It is evident that ***changes in SSCM funding have a clearly disproportional impact on the TRUs in any downside scenario, and at an increasingly negative rate as cuts worsen.***

Impact of State Funding Changes			
Change in PUSF	TRU Avg	Non-TRU Avg	
-6%	-1.7%	-1.4%	
-12%	-4.2%	-2.7%	
-18%	-6.7%	-4.0%	
-24%	-9.3%	-5.3%	

We know it is not the HECC's desire to impose higher risk on the institutions that have the largest proportion of resident students and serve primarily under-represented student populations. Some of these institutions are also located in rural and frontier communities and are most reliant

on and most responsive to state investment. Because of this we propose adjusting this funding structure to better reflect Commission's previous direction and expressed priority for stability and predictability in Mission Differentiation.

Implementation

- The staff report recommends the proposed adjustments be phased-in, but there is no recommendation in the staff report about how and at what rate the proposed adjustments should be phased in. The universities are being asked to support a significant shift in funding without understanding the pace of change and without the tools to model its impact over time. ***This lack of a planning and modeling of the impact of SSCM revisions over multiple biennia and different funding levels creates too many unknowns to move forward at this time.*** The Commission should have a clear understanding of how its decisions will impact the various institutions and most importantly, Oregon students. There is much work to do here, and unfortunately it is left undone before bringing a staff recommendation to the Commission. Because the current funding model has only been in operation during up-budget cycles, we simply do not know how the previous stop-loss/stop-gain system will function when the PUSF is seeing reductions. We do not know what levels of stop-loss/stop-gain make sense in the dynamic budget environment we are currently in, because we lack the tools to model it. The Oregon Office of Economic Analysis is forecasting budget gaps for at least the next three biennia. How should we layer on cuts after cuts? We believe this is a major policy and implementation question that remains undebated and unanswered. Before moving into rulemaking, clarity must be reached.

Due Diligence/Impact

- For several months now, there have been requests for a fully functional multi-biennia funding model similar to the one that currently exists for the SSCM. However, to the best of our knowledge, no such model has been built and made available to help the institutions or the Commission to study the proposed changes for different budget scenarios. This means we do not know how quickly we should implement, what will happen in up scenarios or down, and importantly whether the policy recommendations currently modeled are technically correct and representative of the desires of the Commission. Errors do happen, despite the best of intentions. ***Before moving forward into rulemaking, the HECC should act with proper care given its fiduciary obligation to the state in allocating hundreds of millions of taxpayer dollars and conduct due diligence on the impact of its policy proposals.*** To be clear, work has been done to mockup impacts of changes as if they had occurred this biennium. That is a good start. But that does not allow universities or the Commission to understand the full impact of changes. This is a step that has been taken in advance of rulemaking by the Commission during the last three university formula development and implementation processes – the first SSCM and two iterations of ETSF changes – it should be repeated here.

Summary and Steps Forward

Oregon Tech has been and will continue to be a stalwart supporter of outcomes-based funding. It makes sense to align funding with degree outcomes and to do so in a way that provides additional resources to students from traditionally under-represented backgrounds and to programs that provide pathways to middle- and high-income careers for these students.

However, the recommendations as proposed are incomplete and lack sufficient detail to move forward. Significant additional work remains. This work should first be done in an iterative and inclusive process and not advanced to rulemaking at this time with so much still on the table. We

understand the Commission is eager to put this work behind them. We are too, but expedience at the cost of thoroughness is too high a price.

Though we have outlined several policy concerns, we fully accept that we cannot all get what we want and are willing to accept reductions in funding that are grounded in policy rationale and planned with due care. We do not object to reductions in funding for Oregon Tech. That said, there are several areas which we do not believe represent the policy priorities of our state or of the Commission. Hence, ***we respectfully request the Commission postpone adoption until at least December*** and instruct staff to pursue the following in consultation with the institutional partners and come back with analysis and recommendations.

1. **Adjust the increase/decrease function on Mission Differentiation** funding so that it eliminates the existing one-sided ratchet that permanently disadvantages those institutions who are most reliant on and responsive to state funding;
2. **Provide clear recommendations on a phased-in approach and a specific mechanism such as a stop-loss/stop-gain system** that is gradual, predictable, and responsive to different state budget circumstances;
3. **Retain the existing Dual Credit funding system** -- this could be embedded within Mission Differentiation or within the Activities section of the SSCM, with a structured funding per credit hour rate at or near the current level to sustain these critical programs that save Oregon families tens, if not hundreds of thousands of dollars a year; and
4. **Develop and distribute a multi-biennial funding model tool**, similar to those that have been provided during previous funding model development efforts, allowing the Commission and universities to understand the full implication of such a critical policy decision.

We thank you for your consideration of the above and look forward to working with the Commission and the staff to create a sustainable pathway in support of Oregon's students. Please feel free to contact me or our VPFA, Brian Fox, if you have any questions.

Sincerely,



Nagi G. Naganathan, Ph.D., ASME Fellow
President

cc: David Rives, Chair
Duncan Wyse, Chair, Funding and Achievement Committee
Brian Fox, VPFA, Oregon Tech
File

November 6, 2020

TO: Ben Cannon, Executive Director
Higher Education Coordinating Commission
FR: David McDonald, Associate Vice President for Public Affairs and Strategic
Initiatives

Over the past year and half the SSCM workgroup has met to update the SSCM which was implemented in 2015. This workgroup has operated in a highly collaborative and collegial manner and despite our differing perspectives we continued to be focused on doing what was best for Oregon and Oregon students.

The SSCM is a leading national model that is built on the pillars of equity, degree production, and accountability. The efforts of the workgroup was led by Jim Pinkard who was able to exhibit both great patience and strong persistence. Other members of the HECC staff were also invaluable in our efforts to make data-driven and objective recommendations.

WOU is proud to be part of a state used an equity lens to create its outcome-funding model. This lens has fostered an educational environment that has further increased our shared commitment to diversity, equity, and inclusion. As Oregon's only public university to be designated as an emerging Hispanic Serving Institution (HSI), WOU has fully embraced the statewide goals in this critical area.

The workgroup made a number of recommendations around refining the model and correcting some unintended operational components of the model. The biggest aspect of work where we did not reach full completion was Mission Differentiation. The workgroup agreed that the smaller size of the TRU universities, and our service to Oregon's rural communities were worthy of recognition within the model. Where we could not reach conclusion was how much to fund the Mission Differentiation. For smaller universities such as WOU this funding is critical since the proportion of our overall budget that comes from the state is significantly greater than what the larger campuses receive.

The continued refinement and updating of the SSCM is evidence of the wisdom of the HECC to implement a funding model that is so strongly driven by degree production of Oregon residents. We look forward to working with the HECC Commissioners and staff to advocate for more funding for the PUSF so that Oregon's public universities can help address Oregon's immediate economic and social needs while also building a stronger Oregon for the next decades.





November 5, 2020

Chair David Rives
Commission Members
Executive Director Ben Cannon
Higher Education Coordinating Commission

Dear Chair Rives, Commissioners, and Executive Director Cannon,

When I arrived in Oregon over five years ago as the new president of the University of Oregon, I was aware that the state underfunded higher education. What I was unprepared for was that the state allocated its limited appropriations in a way that provided the University of Oregon far less funding per resident student than most of the other public universities in the state. Since my arrival, I have looked forward to the comprehensive review that the HECC committed to conduct when they adopted the Student Success and Completion Model (SSCM) in 2015. I greatly appreciate all of the work that Jim Pinkard and the HECC staff have done in revising the model. While the staff recommendation still results in the University of Oregon receiving a much lower funding level per student than most of the other universities in the state, the funding gaps have been modestly narrowed.

Therefore, on behalf of the students, faculty, and staff of the University of Oregon, I write to encourage the adoption of the proposed changes to the Student Success and Completion Model as recommended by the HECC staff. While the proposed formula changes do not include all of the components that the University of Oregon was hoping would be achieved, such as consistent base funding for all institutions, the changes are a definite step in the right direction.

The work of the HECC staff was particularly challenging given the fact that PUSF funding may be significantly cut next biennium if the state's economic forecast does not improve. Jim and his staff have approached this task with diligence, dedication, and humor, and we are appreciative of the work they have contributed to this effort.

Over the course of the last twelve months, the task force discussed many components of the SSCM and came up with a series of changes that we believe to be reasonable. These include:

- Updating the cost weighting in the cell values
- Implementing more consistent cost weighting for transfer students from community colleges and other universities
- Implementing a new community college transfer student bonus



- Awarding outcomes funding based on the number of students who graduate, instead of the number of degrees they receive
- Updating the definition of bilingual education
- Changing the area of study bonus to be additive instead of multiplicative
- Updating the definition of STEM fields eligible for the area of study bonus

The University of Oregon's support for the recommendation is not without concern and is contingent upon the commission *not adopting protections for the mission differentiation funding*, which would adversely affect those schools that receive the least amount of this funding. Even with the ground gained with the new formula recommendations, *the University of Oregon and Portland State University will still each receive over \$3,000 less per resident student of mission differentiation funding than the average received by each of the other five campuses*. Any "protection" of this mission differentiation funding would negatively impact the University of Oregon and Portland State University. Given that the University of Oregon and Portland State University are jointly responsible for the education of over 50% of the underrepresented students in Oregon's public universities, we do not feel that it would be equitable to adversely affect the funding of these campuses with any type of "mission differentiation protection." We are grateful that the HECC staff listened to our concerns related to this issue and put forward a proposal that addressed them.

Any changes to the SSCM will have ripple effects both immediate and prospective. The University of Oregon supports the current recommendations; however, we do have some reservations about the additional changes that were made to the cost weightings at the very end of the process.

As staff worked to prepare the final recommendations, changes were made to increase cost weights beyond the national peer comparison set for certain high-demand health care-related fields. Our understanding is that in some cases, the cost weighting that was applied to certain fields was doubled. This change was particularly beneficial to Oregon Tech. While the change may help to buffer the negative financial impact that Oregon Tech would have otherwise faced with the model update, we would encourage the commission to closely monitor the long-term effects of this action. As this change was applied to the cost weights, it represents a dynamic funding change that will grow as Oregon Tech continues to add students in these high-cost fields. As the proposed recommendation is adopted and implemented, we ask that these cost weights be watched very carefully to ensure they do not result in a redistribution of resources that would detrimentally impact other institutions. The proposal before the commission today is a delicate balance, and we are concerned that in the future these weights could tilt that balance to a point where FTE funding inequities among institutions are exacerbated.



We recognize that any decision the HECC makes on the funding formula will prove frustrating at some level to nearly all institutions. ***We believe the proposal in front of you today represents a thoughtful and delicate compromise, and encourage your support.*** We encourage the Commission to revisit the model on a routine basis and work toward the goals of more equitable funding for institutions, investing in research, and recognizing the costs associated with being a Carnegie tier 1 research university.

The changes you are considering today result in a formula that, if implemented as designed, will modestly shift resources toward institutions that produce a majority of Oregon's undergraduate degrees for traditionally underrepresented students. As our country, state, and campuses grapple with how we can address and undo generations of systemic racism, that outcome should be embraced with enthusiasm.

Finally, the University of Oregon is committed to working with other public universities and the HECC to advocate for increased investment in the Public University Support Fund, and need-based aid programs for Oregon students. Conversations about the funding formula are by their nature divisive, but our sincere hope is that these dynamics will not prevent us from working effectively together in the upcoming legislative session to secure the needed resources for all of our campuses and students.

Thank you for your dedicated service.

Sincerely,

Michael H. Schill
President and Professor of Law



VIA ELECTRONIC MAIL

November 5, 2020

HIGHER EDUCATION COORDINATING COMMISSION
3225 25th Street SE
Salem, OR 97302

RE: SOU Comments to Student Success and Completion Model

Dear Commissioners:

At the invitation of Higher Education Coordinating Commission staff, Southern Oregon University respectfully submits the comments below for consideration by the Commission as it considers changes to the Student Success and Completion Model.

At the outset, SOU wishes to thank HECC staff and its university colleagues on the HECC SSCM Task Force for their hard work, mutual respect, and thorough consideration of the many difficult challenges presented by the SSCM. We particularly wish to thank Jim Pinkard for leading an inclusive process and for treating every person and proposal with courtesy and respect.

The SSCM Underserves People of Color, Women, and Under-Resourced Institutions.

The proposed revision to the SSCM offers several positive changes and SOU recognizes that at the outset. Nonetheless, the SSCM continues to put such a over-sized share of its higher education dollars into “Activities” and “Outcomes” that it has a disproportional impact on students of color, women, and institutions with fewer resources. A recent study published in the journal *Education Evaluation and Policy Analysis* supports this conclusion, noting that there is “compelling evidence that PBF [Performance Based Funding] policies lead to unintended outcomes related to restricting access, gaming of the PBF system, and disadvantages for underserved student groups and under-resourced institution types.”¹ The article specifically notes that such bonuses do not sufficiently cover the support services needed to give URM students a better pathway to graduation while they are working toward academic progress. This is

¹ “Performance-Based Funding in American Higher Education: A Systematic Synthesis of the Intended and Unintended Consequences,” Ortagus, Kelchen, Rosinger and Vorhees, *Education Evaluation and Policy Analysis*, (September 20, 2020), at p. 1 (emphasis added).

particularly the case at smaller, under-resourced institutions that receive less funding under PBF funding systems. It is the old “chicken or the egg” problem: they cannot improve those outcomes without more funding and they cannot get more funding without improving the outcomes.

By not providing sufficient base funding *before* rewarding performance, underserved student groups and under-resourced institutions are left chasing from behind without the funding to catch up. SOU is pleased to have conferred the highest percentage of degrees awarded to URM students among all seven universities as recently as AY2018 (28.8%); but it has not been funded in a way that has allowed it to build on that success by investing more in the targeted recruitment and support services necessary to bring more URM students to SOU and support them through graduation. While the model provides an incentive for schools that *graduate* URM students, the SSCM does not fund the support services, recruitment programs, and student aid necessary to materially increase enrollment and success of URM students.

Similarly, a group of gender studies experts led by SOU’s Dr. Kylan de Vries recently completed a study of the SSCM and identified a tendency for the model to privilege male programs at the expense of more female-dominated programs that receive less support. Dr. de Vries observed that “the [SSCM’s] supposedly ‘gender-neutral’ approach to this funding model may inadvertently produce gender inequality, in effect privileging male [sic] students, students in male-dominated fields, and institutions that serve more male-dominated disciplines.”² Simply put, female-dominated disciplines receive less funding than privileged male-dominated fields (whose graduates also earn higher wages after graduation). “Rather than being gender-neutral, the SSCM appears to be gender-blind; in not actively addressing the category of gender, it fosters gender inequality.”³

Dr. de Vries also pointed to other research indicating that, while performance-based funding can improve the overall performance of colleges and universities, it can further widen the performance gap between them.⁴ This highlights the problems associated with the SSCM underserving regional universities. He also points out that the same barriers the model imposes on female students also extend to URM students in that many male-dominated fields receiving extra funding under the SSCM also tend to lack racial and ethnic diversity.

Strictly speaking, the SSCM is underfunding women and URM students. But, as discussed further below, these unintended consequences can be reasonably addressed by the Commission.

The SSCM Has Also Underserved Students at Regional Universities.

Throughout the taks force process, nearly every substantial change to the SSCM was greeted with nervous declarations about the need to ensure stability for institutions that stood to lose funding as a result of any proposed change. While we recognize the natural instinct to value stability, every decision to preserve status quo funding in the name of stability necessarily extends *ongoing* harm and instability that regional universities have experienced since the

² “A Gender Analysis of Oregon’s Student Success and Completion Model,” Sojka, Strenio, Reggo, and de Vries (August 2020), at pp. 12.

³ *Id.* At p. 11.

⁴ “Will the Tide Lift All Boats? Examining the Equity Effects of Performance Funding Policies in U.S. Higher Education,” Favero, Nathan and Rutherford, *Research in Higher Education* (September 2020), pp. 1-25.

inception of the SSCM. That financial instability for SOU, in turn, has meant a series of reductions to vital services and higher tuition increases for students. While the brunt of these harms has been absorbed by SOU and Western Oregon University, there is little doubt that Eastern Oregon University would have had the same experience with the SSCM were it not for the extra \$2.2 million in annual funding it received that SOU and WOU did not.

This is not to say EOU should have received less funding. Rather, it highlights the difference that this relatively modest annual funding can make to the viability of a smaller, regional institution.

Our hope throughout this process was that the Commission would recognize this issue and would choose to remedy the instability the model creates for SOU and WOU students rather than affirm “stability” for universities that have enjoyed the benefits of higher SSCM funding over several years. While we recognize some improvement for the regionals in the current proposal, it strikes us as something of a half-measure (or less)—rather than an solution.

The SSCM’s Overemphasis on Outcomes Creates Instability.

Much of the regional stability problem stems from over-funding Activities and Outcomes in the SSCM. Oregon distributes significantly more funding to Activities and Outcomes (i.e., performance) than most other states.⁵ In fiscal year 2020, Oregon dedicated more than **83%** of its public university support funding through performance-based funding (the “Activities” and “Outcomes” portions of the SSCM). Under the proposed revision to the SSCM model, that number hardly changes at **82.7%**. To put Oregon’s excessive reliance on performance-based funding into perspective, there are only seven states that allocate more than **35%** of their state funding to performance or outcomes. Not only is Oregon among a small band of outliers, it overshoots the great majority of other states several times over.

One Very Small Change Would Address These Problems.

At the launch of the SSCM Task Force in October 2019, every institution acknowledged the importance of applying the HECC Equity Lens to our work. Yet, the newly proposed SSCM does almost nothing to improve the state’s support for black, indigenous, and peoples of color (BIPOC) student populations. The “Equity” tab in the proposed revision to the SSCM model shows the adjustment to URM funding is *less than one-quarter of one percent* (0.25%) of the \$410 million in the PUSF.

In fairness to the SSCM Task Force, it was not entirely obvious how small that URM increase in outcomes would be until the end of the process when all proposed changes could be seen together. Yet, it is difficult to now look at the proposed revision to the SSCM and not see that the new model fails to address the most significant call to action on social justice and economic inequality for people of color that this nation has seen in the past 50 years. When the only

⁵ According to HCM Strategists “Driving Better Outcomes: Fiscal Year 2020 State Status Typology Update,” Oregon allocated the fifth highest share of its state higher education funding allocation to Outcomes Based Funding methods. (See <http://hcmstrategists.com/wp-content/uploads/2020/08/DRIVING-BETTER-Outcomes-Fiscal-Year-2020-State-Status-Typology-Update.pdf>, at p. 20).

change benefiting BIPOC students is a 0.25% nudge for URM degree completion, it is hard to conclude that the adjustment will have any meaningful impact let alone conclude that this change has answered the call to action.

Frankly, improving URM support inevitably requires a shift away from only funding URM students through degree completions. As the Ortagus article explained, focusing URM funding on degree completions leaves the vital support services necessary to give BIPOC students, women, and other underserved persons an equitable pathway to graduation underfunded while they pursue their academic progress. When we consider the role higher education can play in bringing about social change, increasing funding for these programs is imperative.

For that reason, SOU proposes just one small but critical change to the proposed SSCM: We recommend that \$14 million of funding be moved from “Activities” and “Outcomes” portions of the SSCM to the Mission Differentiation pool of funding and that the funds be evenly divided among the seven public universities for use in supporting URM students.

With this extremely modest change, the Commission would significantly improve funding for URM student supports while stabilizing the schools starved by the model; and it would do so without changing the SSCM’s status as a heavily performance-driven funding model. Oregon would still rank sixth among all states in the percentage of funds distributed through performance based funding. The share of state higher education funds distributed through performance metrics would change by only about 3%, without harming the state’s heavy focus on outcomes.

Conclusion.

We appreciate the process led by HECC staff and the balanced approach they brought to every meeting. No pathway would have left all seven universities feeling satisfied. Some dissatisfaction was inevitable.

Nonetheless, there is still one critical area of focus left unaddressed in the final proposal: Equity, Diversity, and Inclusion. The Commission faces a choice. It can leave the issue be and let a historical significant call to action pass us by; or, it can make one simple but material change that will serve as an open declaration of Oregon’s support for educational access, economic equality, and social justice for BIPOC students.

SOU respectfully recommends this important adjustment to the proposed SSCM model to advance the HECC Equity Lens and improve stability for regional institutions while promoting educational access for BIPOC students and women throughout our state.

Respectfully,



Gregory M. Perkinson
Vice President of Finance and Administration

A Gender Analysis of Oregon's Student Success and Completion Model

August 2020

Jacqueline Strenio, PhD

Jesse Jo Rego

Carey Jean Sojka, PhD

Kylan Mattias de Vries, PhD



Executive Summary

This report provides a gender analysis of Oregon's higher education funding model, the Student Success and Completion Model (SSCM), which determines the distribution of state funds to the seven public universities through three categories: mission differentiation, activities-based funding (assessed through student credit hours), and outcomes-based funding (measured as degree completions). Cost weights are applied to student credit hours and degree completions, adjusting for course-/degree-level, program duration, and type. Additional area-of-study weights are applied to completions in priority areas, and Bachelor's degrees earned by priority populations are awarded stackable bonus weights. While this cost-weighting system (specifically, the program cost-weights) is meant to adjust for the differences in costs associated with different programs, in combination with the area-of-study bonuses, it may result in gendered funding discrepancies. Following a gender-responsive budgeting approach, gender-disaggregated statistics on Bachelor's degrees completed by academic program are presented. As the funding model only rewards activities and outcomes by residents, analysis is restricted to Bachelor's degrees completed by Oregon residents. Data covers degree completions from all seven public universities from 2016-2019, as well detailed data on Southern Oregon University, specifically. Programs are ranked by their final cost-weight from highest to lowest, illuminating gendered trends in completions by cost-weight. Programs that qualify for the area-of-study additional weighting bonus are highlighted.

Major Findings:

- Although budgetary decisions may appear to be objective and gender-neutral by excluding gender as a unit of analysis, some budgetary decisions regarding the allocation of resources can explicitly and/or implicitly privilege men.
- The lowest cost-weighted disciplines are female-dominated (primarily the social sciences and humanities). Universities graduating students from more female-dominated disciplines thus receive less funding on average.
- Some male-dominated STEM fields receive multilevel prioritization in each of the Mission Differentiation Funding, Activity-Based Funding, and Outcomes-Based Funding without transparent evidence for the need for this prioritization across each area of funding.

Key Take-Aways:

- Rather than being gender-neutral, the SSCM appears to be gender-blind; in not actively acknowledging or addressing gender as a category, it fosters gender inequality in our state.
- Greater transparency is needed in the methods, rationale, and evidence especially in terms of outcomes-based weighting used in the model.
- Gender-responsive budgeting requires continual dialogue, monitoring, and evaluation of new outcomes with attention to the gendered impacts of funding.
- Future work should include an intersectional analysis of disciplines graduating underserved and marginalized students.

Introduction

Women make up the majority of those that earn bachelor's degrees at the seven public universities in Oregon. In 2018-2019, 54% of all Bachelor's degrees awarded to Oregon residents were awarded to women. Nevertheless, when it comes to state-funding for higher education, degrees in different programs are not worth the same in the funding model. In fact, after cost-weighting and area-of-study bonuses, one completed degree in Engineering is worth more than two degrees completed in Psychology by students of similar identities¹; it is significant that the field of Engineering has more men than women students while Psychology has more women than men students.

While these cost-weights are intended to account for the relative costs of providing these courses and degrees, this report examines the potential unintended consequences of these weights in perpetuating gender inequality. Gender is not considered in the funding model, and as women outnumber men in higher education, it may appear on the surface that the funding model well-represents women students. **However, we argue that the supposedly “gender-neutral” approach to this funding model may inadvertently reproduce gender inequality, in effect privileging men students, students in male-dominated fields, and institutions that serve more male-dominated disciplines.**

In this report, we apply a gender perspective to Oregon's funding model, the Student Success and Completion Model (SSCM), guided by gender-responsive budgeting protocols. When it comes to education, we hypothesize that the SSCM impacts students of different genders disproportionately due to gendered educational trajectories, which are oftentimes the result of social norms and societal discrimination. We present gender-disaggregated statistics on degree completions by program area. We rank academic programs by SSCM “cost-weight category”² to assess whether the funding model has a differential impact in the form of resource allocation on different genders. With increasingly limited state-level funding for higher education in the midst of the COVID-19 global pandemic, this analysis is even more imperative³. **This research emphasizes that although budgetary decisions appear to be objective and gender-neutral by excluding gender as a unit of analysis, budgetary decisions regarding the allocation of resources can explicitly and implicitly privilege men.**

The goal of this report is to assess whether SSCM's budgetary allocations follow the HECC's policy commitments to their equity lens. Although women are attending and completing college at higher rates than men in Oregon (Oregon HECC 2019a; see Figure 1) and nationally (US Dept of

¹ Additional weighting bonuses are applied to degrees completed by low-income students, minority students, rural students, and student Veterans; this comparison assumes the students are similar across these four prioritized dimensions.

² The term “cost-weighting” is used to describe the differential adjustments in the value of student credit hours and outcomes-based allocation by CIP, course type, and course/degree level in the funding model. They are the same at all public institutions in Oregon and are meant “to account for the relative cost to an institution of providing a degree or course.” (Definition from <https://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=249518>)

³ Women may be further disadvantaged in their education during this epidemic. Women are often responsible for greater care labor, reducing their time for their studies.

Education 2019), women also hold more student loan debt (AAUW 2019a) and a significant gender wage gap persists (AAUW 2019b). The HECC's equity lens demonstrates the state's commitment to "improve educational attainment rates of students who are presently underserved" (Oregon HECC 2017 [2014]); while women are not an underserved population at Oregon institutions overall, women nationally are underserved in the STEM fields. Furthermore, women are overrepresented in the lowest weighted programs in Oregon. **The consequence is that women students are disadvantaged because Oregon universities graduating students from more female-dominated disciplines receive less funding, on average, given that their students graduate with degrees in lower-weighted programs.**⁴

Women are often underrepresented and underserved in STEM fields, and studies demonstrate that various factors contribute to this gender difference. Gender bias, as a form of discrimination, influences perceptions of women as less competent than men in STEM fields (Eaton, Saunders, Jacobson, & West 2020; Roper 2019), which can then also lead women to pursue STEM fields at lower rates than men (Farrell & McHugh 2017). Women who do pursue STEM degrees then earn less than men in STEM-related occupations (Olitsky 2013). Studies further suggest that People of Color (Eaton et al 2020) and LGBTQ people (Patridge, Barthelemy, & Rankin 2014) experience discrimination in STEM fields. When utilizing an intersectional approach, Women of Color are particularly disadvantaged within STEM fields (Gándara & Rutherford 2020, Scott & Elliot 2020). Unlike STEM, while women are overrepresented in Healthcare Professional and related degree programs, studies also show that white men graduates from programs such as nursing are likely to experience the "glass escalator," which can encourage their promotion above women and Men of Color in these fields (Williams 1992; Wingfield 2009).

The diversification of male-dominated fields and the importance of producing more graduates in some of those areas is not in dispute. However, evidence suggests that increased funding and recruitment of underserved students does not significantly diversify the field of STEM (Ferrara & Miller 2020). Rather, several researchers point to the assumptions of gender- and race-blind ideology within the culture of STEM, where these biases go unchecked and thus perpetuate inequalities (Ferrara & Miller 2020, see also Eaton et al 2020, Riegle-Crumb et al 2012, Scott & Elliot 2020). In other words, increased funding through mechanisms such as higher cost-weights does not significantly increase more diverse graduates within male-dominated fields such as STEM.

Data and Methodology:

We conducted a gender impact assessment of Oregon's outcomes-based funding model, the SSCM, focusing specifically on the outcomes-based funding category and Bachelor's level degree completions. The SSCM was adopted in 2014 and phased-in during the 2015-2017 biennium to distribute Oregon's state funding to the seven public universities. This includes Portland State University, Oregon State University, University of Oregon, Oregon Institute of Technology,

⁴ Assuming that the percentage of students that fall into the 'priority populations' and are thus eligible for the stackable bonus weights per degree completion are similarly represented across programs at the universities.

Southern Oregon University, Western Oregon University, and Eastern Oregon University. The SSCM is composed of three funding categories: mission differentiation funding, activity-based funding, and outcomes-based funding (Oregon HECC 2019b), and the increasing weight the SSCM places on completions (via the outcomes stream) makes it distinct from previous funding models. After mission differentiation funding is allocated, 40% of the remaining budget is committed to activities-based funding and 60% to outcomes-based funding.

The activities-based funding category funds student credit hours (SCH) through a cost-weighting process that takes into account both the program area and course level (BA/BS: Freshman/Sophomore; BA/BS: Junior/Senior; MA/MS; and PhD) of credit hours completed by Oregon residents. This cost-weighting system is meant to adjust for the relative differences in cost associated with providing different academic courses.

The outcomes-based funding category uses data on degree and graduate certificate completions by Oregon residents (and all PhD completions regardless of residency status) and also applies cost-weighting adjustments based on program and degree-level. The cost-weights are meant to adjust the value of each degree to account for the relative cost of providing that degree. Transfer student degrees are discounted. Additionally, area-of-study bonuses are awarded to degree completions in STEM and Healthcare fields, which are weighted at 120%, and Bilingual Education, weighted at 220%. The HECC classifies these as “priority degree areas” and “high-demand and high-reward areas” (Oregon.gov/HigherEd). Lastly, stackable bonus weighting is applied to BA/BS degree completions by underrepresented students which include low-income students (measured by Pell Grant eligibility), underrepresented minority population students⁵, rural students, and Veteran students. We focus our analyses on the cost-weighting by program and area-of-study (looking at the ‘final cost-weight’ that incorporates both of these components) to highlight the resulting gendered differences in funding. Therefore, our analyses do not provide the *actual* outcomes-based funding awarded to universities as we do not apply the additional bonus weights on degrees earned by underrepresented students.

The HECC Office of Research and Data provided gender-disaggregated data on degree completions by Classification of Instructional Program (CIP) codes earned by Oregon residents at the seven universities for five academic years: 2014/2015 through 2018/2019. Southern Oregon University’s Office of Institutional Research provided additional de-identified student-level data on degree completions by Oregon residents from academic years 2016/17, 2017/18, and 2018/19. We focus our analysis on Bachelor’s degrees awarded to Oregon residents only. Data on cost-weights, area-of-study bonuses, and final cost-weights come from the HECC’s SSCM Projection Tool.

⁵ “Underrepresented Minority population” consists of resident undergraduate students identified as American Indian/Alaskan Native, Hispanic, Pacific Islander, Black, African American or two or more races if one of those two or more races is one of those listed in this definition.

We follow a gender-responsive budgeting approach for introducing gender into budgetary decision making and resource allocation in higher education. Gender-responsive budgeting is a method of gender mainstreaming, in which gender-disaggregated analyses are used to examine the differential impacts of budgeting decisions. Forms of gender-responsive budgeting were first promoted in relation to the 4th World Conference on Women in Beijing in 1995 (UN Women 2014 [1995]) and encouraged especially in situations in which there are limited state-level resources. This methodology has primarily been applied to higher education funding in the context of European universities through the European Union-funded project “Gendering the Academy and Research: combating Career Instability and Asymmetries (GARCIA)” (Steinthorsdottir, Heijstra, Einarsdottir, & Petursdottir 2016).

In what follows, we present the first task of gender-responsive budgeting: a gender impact assessment, examining the potential for differential impacts by gender in Oregon’s current funding model. **However, gender-responsive budgeting also requires continued dialogue, monitoring, and evaluation of new outcomes.** Therefore, this report is meant only to serve as a conversation starter in the process.

To examine the gendered impact, we rank programs by their final cost-weight (from highest weighted to lowest weighted and alphabetical within the same funding tier) and present the gender breakdown of Bachelor’s degree completions by men, women, and gender-unknown⁶ Oregon residents within each program for all seven public universities. We also present the gender-disaggregated statistics by CIP codes for SOU. An example of the mapping of CIP codes into SOU majors is presented in Appendix Table A4.

Results:

At the broadest level, this analysis shows that STEM fields are consistently male-dominated. About two-thirds of resident Bachelors degrees in STEM fields at the seven universities are earned by men. Per credit hour and per degree completion, these male-dominated disciplines receive more funding than programs spanning the Social Sciences and Humanities through cost-weighting in both the outcomes- and activities-based funding streams. Additionally, each STEM degree is further weighted with an area-of-study bonus.

As Figures 1 and 2 show, overall, 54% of Oregon resident bachelor's degrees are awarded to women, yet only 33% of the 2,842 STEM degrees were awarded to women in AY 2018-2019. In the highest cost-weighted STEM programs of study, Engineering and Engineering-Related Technologies and Technicians, the discrepancies are large: 81% of the 979 degrees and 96% of the 83 degrees, respectively, awarded in AY 2018-2019 in these two programs were awarded to men graduates, see Figure 3. The other prioritized program that receives an area-of-study weighting bonus--Healthcare Professional and Related Programs--is female-dominated, with 76% of the 832 total degrees

⁶ Gender is self-reported; the ‘unknown’ category includes not reported as well as other options available at some schools.

awarded to women in the most recent academic year; however, the total number of students in the male-dominated STEM fields are greater. However, this highest weighted female-dominated field is less female dominated than the highest weighted male-dominated field is male-dominated. Figures 4 and 5 show the relationship between the share of degrees completed by men and final cost-weight in each program. The size of the bubble represents the overall number of degrees completed in that program and programs that receive area-of-study bonuses are colored in green (STEM) and yellow (Health Professions).

These aggregate STEM numbers also obscure some STEM program areas that are female-dominated, most notably, the Biological and Biomedical Sciences. Although both programs receive the 120% STEM Area of Study bonus, Biology has a lower cost-weight than Engineering, meaning degrees awarded in that program are weighted less than Engineering degrees. **Thus, the gendered weighting differences across disciplinary areas may also be present within areas; within STEM, the highly male-dominated field of Engineering is weighted more than the female-dominated field of Biology.**

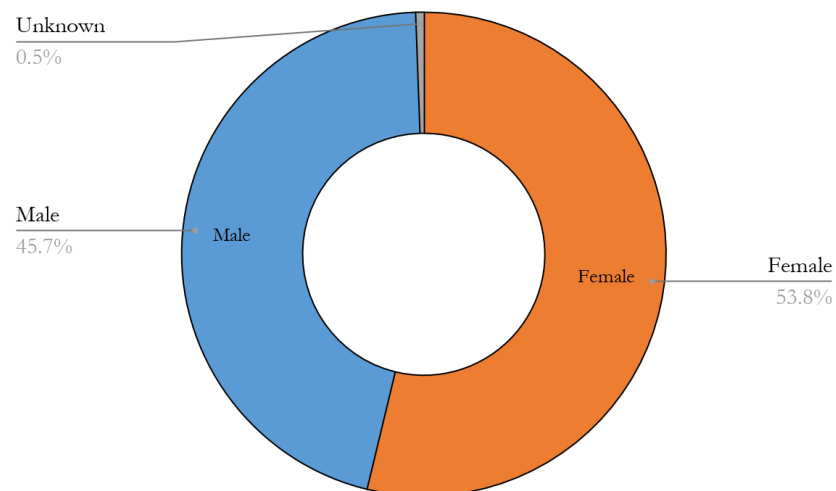


Figure 1. All Completed Bachelor's Degrees by Gender, OR Residents only, AY 2018/19 (N=12,392)

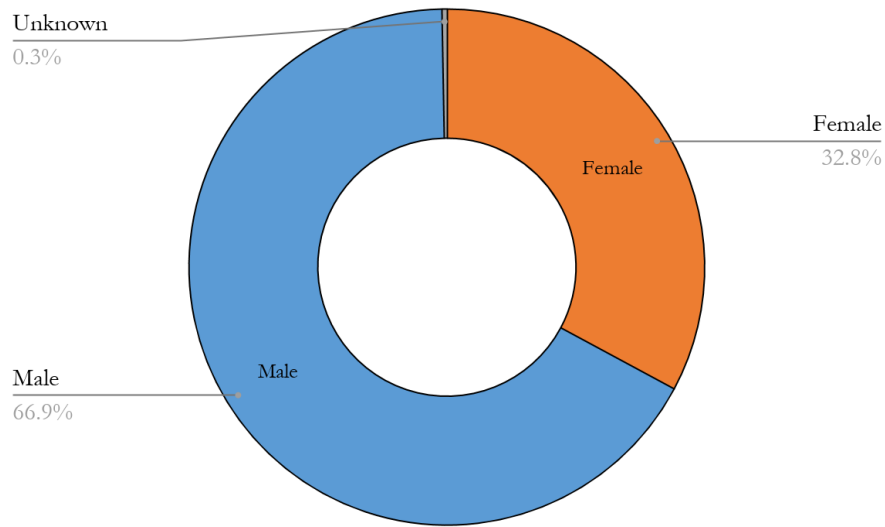


Figure 2. All Completed STEM Bachelor's Degrees by Gender, OR Residents only, AY 2018/19 (N=2,842)

The results of this analysis also show that, on average, the lower-weighted programs in the Social Sciences and Humanities are predominantly completed by women graduates. As shown in Figure 3, up to 65% of degrees in the areas of study including Foreign Languages, Literatures, and Linguistics, English Language and Literature/Letters as well as Liberal Arts and Sciences, General Studies and Humanities are completed by women students. For other areas of study such as Area, Ethnic, Cultural, Gender, and Group Studies, the percentage of women graduates has reached up to 84% in some years. In addition, only 3 out of the 10 lowest weighted areas of study have higher proportions of men graduates than women graduates. This trend recurs in all academic years for which we have data. Refer to Appendix Table A1 for detailed numbers.

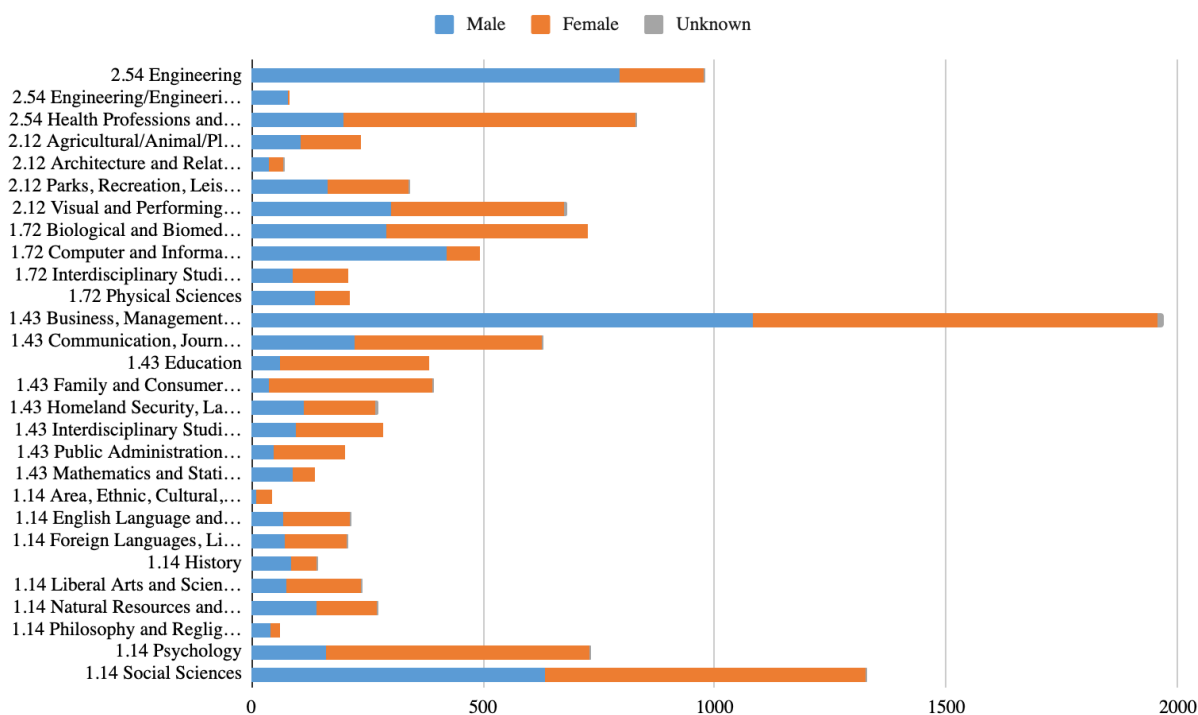


Figure 3. Degree Completions by Program and Gender, Ranked by Cost-Weight, All Public Universities, OR Residents Only, AY 2018-2019

Note: Figure 3 is replicated for SOU data only and presented in the Appendix.

Graduates with unknown gender identifications make up a very small percent of graduates in all areas of study. In the 2018-2019 academic year, the greatest percentage of degrees completed by graduates with unknown gender identifications is in Philosophy and Religious Studies, one of the lowest-weighted areas of study.

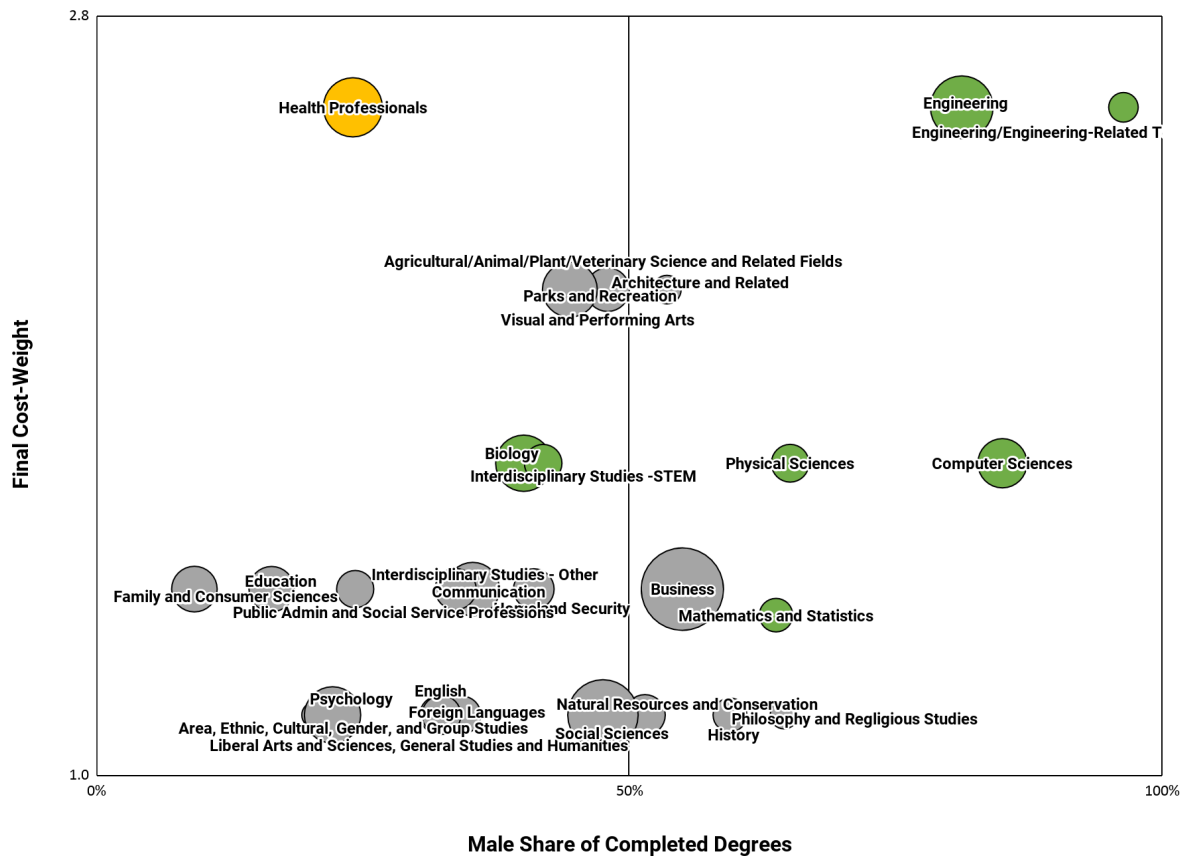


Figure 4. Men's Share of Completed Bachelor's Degrees by Program and SSCM Outcomes-Based Cost-Weight at All Institutions, OR Residents Only, AY 2018-2019

Note: Each bubble in the figure above represents a specific program, labelled with abbreviated CIP description, and depending on its location you can see the share of all completed degrees in that program that are awarded to men (horizontal axis) and the cost-weight by which degree completions are scaled (vertical axis). The size of the bubble represents the total number of degree completions in that program. Green bubbles are those that received a STEM area-of-study bonus and yellow bubbles are those that received another area-of-study bonus. Those bonuses are already incorporated in the final cost-weight.

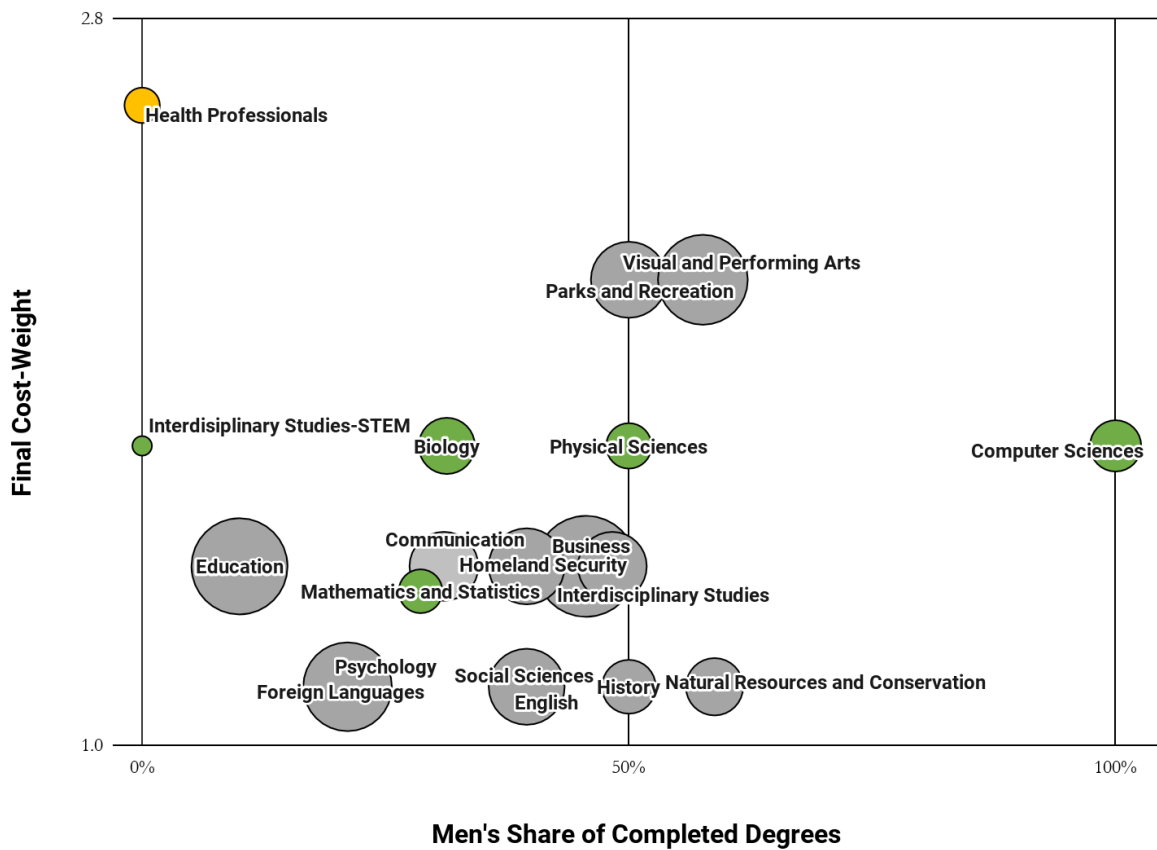


Figure 5. Men's Share of SOU Completed Bachelor's Degrees by Program and SSCM Outcomes-Based Cost-Weight, OR Residents Only, AY 2018-2019

Note: Each bubble in the figure above represents a specific program, labelled with abbreviated CIP description, and depending on its location you can see the share of all completed degrees in that program that are awarded to men (horizontal axis) and the cost-weight by which degree completions are scaled (vertical axis). The size of the bubble represents the total number of degree completions in that program. Green bubbles are those that received a STEM area-of-study bonus and yellow bubbles are those that received another area-of-study bonus. Those bonuses are already incorporated in the final cost-weight.

Discussion, Limitations, and Recommendations:

This report calls attention to some of the gendered consequences for our Oregon students that arise due to the fact that various academic fields are valued differently in the current funding model in both the activities and outcomes funding streams. A gender-aware perspective highlights that the benefits of state education spending are not evenly distributed. **Rather than being gender-neutral, the SSCM appears to be gender-blind; in not actively addressing the category of gender, it fosters gender inequality.** The costs per student credit hour and degree in different disciplines should be re-evaluated so that the price categories can transparently be generated based on empirical evidence.

This analysis is not to argue that particular fields should receive less funding, but that we need additional evidence and transparency in the justification for funding that may inadvertently be increasing particular types of inequity. In other words, if funding per woman student is lower than funding per man student on a statewide level because of these weights, we need to consider the gendered consequences of this model.

Less funding to female-dominated disciplines may have a gendered effect on retention and completion of degrees. Because gaps in state funding are addressed through tuition increases, this may also increase gender inequality for our graduates, in particular because women graduates carry more student loan debt (AAUW 2019a) and are negatively impacted by the gender wage gap (AAUW 2019b) which then affects women graduates' ability to repay student loan debt.

There are several limitations to our study. First, we focused our analysis on the outcomes-based funding stream as this is the category through which 49-50% of total state funding is allocated (Oregon HECC 2019b)⁷. Secondly, we only examined the gendered trends in a subset of degree completions, Bachelor's degrees; however, these represent the vast majority of degree completions in the state. We did not look at the gender breakdown of student credit hour completions by program, but recommend this be assessed in the future. Additionally, we have not completed a gender analysis of the mission differentiation categories. However, because mission differentiation funding includes additional funding for some STEM areas, some male-dominated fields are receiving priority in all three funding categories: mission, activities, and outcomes. Further analysis of mission differentiation may illuminate the additional gendered consequences of the SSCM.

As mentioned, the provided data only allowed for analyses on the gendered breakdown of degree completions by program. This does not pick up on the *actual* outcomes-based funding to the universities as we do not incorporate the additional funding weights awarded to all degree completions by low-income, rural, Veteran, or underrepresented minority students that are awarded on top of the program-specific weights and AOS bonuses.

⁷ As a funding model that prioritizes outcomes-based funding, the SSCM is still relatively in its infancy, and in order to grow into a truly well-rounded and inclusive funding model it needs consistent monitoring and research in order to ensure it does not elicit bias.

Another limitation of this study is that Oregon institutions have been primarily collecting binary gender data; however, this data does not allow us to capture information about transgender students who identify within the gender binary and may also misidentify students who have increasingly been identifying with gender outside the binary (e.g., “unknown” gender identity cannot be considered to be the same as nonbinary or other gender expansive identities). Future gender analysis of the SSCM will benefit from data that better represents our transgender, nonbinary, and gender expansive students’ identities and experiences.

Additionally, this analysis does not incorporate other categories such as race/ethnicity. The Oregon HECC (2019a) highlights the increasing challenges for underserved Oregonian students in attending and graduating from Oregon public institutions. Because not only women but also People of Color (Eaton et al 2020) and LGBTQ people (Patridge et al 2014) experience heightened discrimination in some male-dominated fields, we feel this is an area that warrants future analysis. An intersectional analysis was beyond the scope of this report but would further illuminate the potential consequences of the SSCM on reducing or perpetuating inequality.

We would also encourage the Oregon HECC to consider weighting bonuses for targeted student populations in addition to those already included (underrepresented minority populations, low income students, rural students, and Veterans). Oregon HECC beliefs and values include a commitment “to improving the postsecondary success of students who have been historically underserved, including students of color, English language learners, economically disadvantaged students, LGBTQ students, and students with disabilities” (Oregon HECC n.d.). We would encourage the HECC to consider bonuses for English language learners, LGBTQ students, and students with disabilities in addition to the four targeted student populations already addressed in the model.

Conclusions:

Research has found that while performance-based funding can improve the overall performance of all colleges and universities, it can also widen the performance gap between them (Favero and Rutherford 2020). Favero and Rutherford (2020) found that the benefits of such a funding model may disproportionately accrue to institutions that are already positioned to be better performers. Hagood (2019) also found that among public four-year institutions, high-resource institutions are more likely to benefit from performance-based funding than lower-resource institutions. Findings from case narratives in research from the state of Tennessee highlight similar sentiments: respondents from a regional university argue that the funding system seems designed to benefit the flagship, and largest, public institution in the state (Ness et al. 2015). The end result is a widening of the outcomes gap between universities (Favero and Rutherford 2020).

Researchers have found similar results among historically Black colleges and universities (HBCUs); performance-based funding policies adversely affected graduation rates at HBCUs relative to non-

HBCUs (Favero and Rutherford 2020). These results imply that such outcomes-based funding models may have unintended consequences in terms of differentially funding institutions based on the racial-composition and gender-composition (as explored in our report) of the student population. These effects can translate into very real outcomes gaps. In fact, research finds that among 2-year institutions in Texas and Washington, those designated as minority-serving institutions (MSIs) receive the same or less per-student state funding than non-MSIs under performance-based funding models and are specifically disadvantaged under models that emphasize degree completions (Li et al. 2018).

Therefore, by assuming “a level playing field” (Ness et al. 2015) among universities and colleges and by failing to consider historical and institutional context seemingly objective performance-based funding policies can be biased towards rewarding already higher-resourced and better-performing institutions. Although the premiums, or additional cost-weights, applied to degree completions by these target populations are helpful, Ness et al. (2015) argue that, in the case of Tennessee, such premiums are unable to offset the difficulties faced by those student populations.

Similarly, the findings in our paper emphasize that by failing to account for gender norms and barriers that have historically resulted in a lack of gender diversity (the focus of our report) but also a lack of racial and ethnic diversity in STEM, the STEM bonuses in Oregon’s SSCM result in gender-biased funding. While recent work has found that STEM incentives under performance-based funding models are successful in terms of increasing both the total number of STEM bachelor’s degrees and the share of all bachelor’s degrees that are in STEM fields, the research also has implications for gender bias (Li 2020). Li finds that institutions with higher proportions of women students awarded fewer degrees in STEM fields and cautions that such incentives may encourage disinvestment in other (more female-dominated) programs in the social sciences, humanities, and arts which may already be disadvantaged in terms of their ability to secure external grant funding. In the case of Oregon and the SSCM explored in this paper, smaller, regional universities have less of a financial ‘cushion’ to help fill any gaps in state funding. Although not necessarily causal, this implies that in most cases, any reduction in state funding more than likely must be offset by student tuition increases.

After reviewing the model, we understand the importance of activities-based weights that prioritize some fields, including STEM, as these fields can be more costly to provide. What seems to be a concern is the multilevel prioritization of these male-dominated fields in *both* the activities-based weights and the outcomes-based weights (and sometimes in the mission differentiation as well) without transparent evidence of the need for or consequences of that *multilevel* prioritization. Transparency in the calculations and reasoning behind weights as well as evidence for the results of current weights would be beneficial, for instance, by providing evidence that the cost-weights accurately reflect cost differences across programs and that specific academic disciplines defined as high-demand and high-reward benefit the State of Oregon. Some questions to consider are whether graduates in higher weighted disciplines, particularly male-dominated disciplines of concern in this

report, stay in Oregon, thus economically contributing to communities in these areas, and if there is evidence that the current weights demonstrably contribute to higher levels of graduation in these fields, especially for women and People of Color. This evidence is particularly important given that the current weighting may be disadvantaging our women students and reproducing gender inequality in our state.

Appendix:

Table A1: Resident Bachelor's Degrees by Gender and Program, All Public Universities

CIP	Name	Weight	2016-17				2017-18				2018-19			
			Fem	Mal	Unk	N	Fem	Mal	Unk	N	Fem	Mal	Unk	N
14	Engineering	2.54	18%	81%	0%	915	17%	82%	1%	971	18%	81%	0%	979
15	Eng. & Related Technologies	2.54	9%	91%	0%	97	12%	88%	0%	77	4%	96%	0%	83
51	Health Professions	2.54	75%	25%	0%	909	77%	23%	0%	896	76%	24%	0%	832
01	Agricultural/Animal/Plant/Veterinary Sciences	2.12	56%	44%	0%	241	63%	36%	1%	236	56%	44%	0%	237
04	Architecture	2.12	43%	57%	0%	77	51%	49%	0%	83	45%	54%	1%	71
31	Parks and Recreation	2.12	49%	51%	0%	324	55%	45%	0%	337	51%	48%	1%	342
50	Visual/Performing Arts	2.12	58%	42%	1%	671	58%	41%	0%	647	55%	44%	1%	680
11	Computer Sciences	1.72	15%	85%	1%	393	14%	85%	1%	409	15%	85%	0%	494
26	Biology	1.72	64%	36%	1%	784	59%	40%	1%	722	60%	40%	0%	726
30xx	Interdiscip. Studies STEM	1.72	58%	42%	0%	216	57%	42%	1%	207	57%	42%	1%	210
40	Physical Sciences	1.72	30%	70%	0%	228	33%	67%	0%	225	35%	65%	0%	212
09	Commun	1.43	64%	36%	0%	571	64%	36%	1%	599	64%	35%	0%	629
13	Education	1.43	87%	13%	0%	322	85%	15%	0%	331	84%	16%	0%	384
19	Family and Consumer Sciences	1.43	92%	8%	0%	405	90%	10%	0%	437	90%	9%	1%	393
30xx	Interdiscip. Studies - Other	1.43	72%	28%	0%	261	70%	30%	0%	284	66%	34%	1%	285
43	Homeland Security, etc	1.43	50%	49%	2%	243	56%	43%	1%	289	57%	41%	2%	273
44	Public Admin	1.43	75%	25%	0%	215	81%	19%	0%	227	76%	24%	0%	202
52	Business	1.43	45%	55%	0%	1,871	46%	53%	1%	1,976	44%	55%	1%	1,970
27	Mathematics and Statistics	1.37	32%	68%	0%	131	23%	77%	0%	122	36%	64%	1%	138

03	Natural Resources and Conservation	1.14	50%	49%	1%	321	49%	50%	1%	330	48%	51%	1%	274
05	Area, Ethnic, Cultural, Gender, and Group Studies	1.14	84%	16%	0%	56	78%	19%	3%	58	80%	20%	0%	44
16	Foreign Languages	1.14	65%	35%	0%	231	62%	38%	1%	199	64%	34%	1%	210
23	English	1.14	65%	35%	0%	235	67%	32%	1%	244	67%	32%	0%	215
24	Liberal Arts and Sciences	1.14	71%	29%	0%	349	63%	35%	2%	300	66%	32%	1%	238
38	Philosophy /Religious Studies	1.14	28%	72%	0%	50	33%	67%	0%	58	32%	65%	3%	62
42	Psychology	1.14	73%	26%	1%	845	74%	26%	0%	766	77%	22%	1%	732
45	Social Sciences	1.14	53%	47%	1%	1,340	54%	45%	1%	1,279	52%	48%	0%	1,330
54	History	1.14	40%	60%	0%	156	36%	64%	0%	162	39%	59%	1%	143
	Total		55%	45%	0%	12,457	55%	44%	1%	12,471	54%	46%	1%	12,392

Table A2: Resident Bachelor's Degrees by Gender and STEM, All Universities

	2016-17				2017-18				2018-19			
	Fem	Male	Unk	N	Fem	Male	Unkn	N	Fem	Male	Unkn	N
STEM	35%	65%	0%	2,764	32%	67%	1%	2,733	33%	67%	0%	2,842
Non-STEM	61%	39%	0%	9,693	61%	38%	1%	9,738	60%	39%	1%	9,550
Total	55%	45%	0%	12,457	55%	44%	1%	12,471	54%	46%	1%	12,392

Table A3: Resident Bachelor's Degrees by Gender and Program, SOU Only

CIP	Name and Weight		2016-2017				2017-2018				2018-2019			
			Fem	Male	NB	N	Fem	Male	NB	N	Fem	Male	NB	N
51	Health Professionals	2.54	0.0%	0.0%	0.0%	0	0.0%	0.0%	0.0%	0	100%	0.0%	0.0%	3
31	Parks and Recreation	2.12	48.9%	51.1%	0.0%	45	61.5%	38.5%	0.0%	26	47.4%	50.0%	2.6%	38
50	Visual/Performing Arts	2.12	50.0%	50.0%	0.0%	66	52.2%	47.8%	0.0%	67	42.4%	57.6%	0.0%	59
26	Biology	1.72	76.2%	23.8%	0.0%	21	63.2%	36.8%	0.0%	19	68.8%	31.3%	0.0%	16
11	Computer Sciences	1.72	15.4%	84.6%	0.0%	13	9.1%	90.9%	0.0%	11	0.0%	100%	0.0%	12
30.08	Interdisciplinary Studies-STEM													
		1.72	0.0%	100%	0.0%	1	0.0%	100%	0.0%	1	0.0%	0.0%	0.0%	0
40	Physical Sciences	1.72	62.5%	37.5%	0.0%	8	46.2%	53.9%	0.0%	13	50.0%	50.0%	0.0%	8

52	Business	1.43	54.3%	45.7%	0.0%	92	54.7%	45.3%	0.0%	95	53.2%	45.6%	1.3%	79
9	Communication	1.43	66.7%	33.3%	0.0%	24	72.2%	27.8%	0.0%	18	69.0%	31.0%	0.0%	29
13	Education	1.43	90.9%	9.1%	0.0%	66	87.9%	12.1%	0.0%	58	90.0%	10.0%	0.0%	70
43	Homeland Security, etc	1.43	55.8%	41.9%	2.3%	43	60.0%	40.0%	0.0%	40	60.5%	39.5%	0.0%	38
30	Interdisciplinary Studies-other	1.43	64.7%	35.3%	0.0%	17	57.6%	39.4%	3.0%	33	41.4%	48.3%	10.3%	29
27	Mathematics and Statistics	1.37	33.3%	66.7%	0.0%	6	0.0%	100%	0.0%	7	71.4%	28.6%	0.0%	7
23	English	1.14	77.3%	22.7%	0.0%	22	55.6%	44.4%	0.0%	18	60.0%	40.0%	0.0%	20
16	Foreign Languages	1.14	75.0%	25.0%	0.0%	8	50.0%	50.0%	0.0%	8	80.0%	20.0%	0.0%	5
54	History	1.14	31.3%	68.8%	0.0%	16	0.0%	100%	0.0%	7	50.0%	50.0%	0.0%	14
3	Natural Resources and Conservation	1.14	30.0%	70.0%	0.0%	10	64.3%	35.7%	0.0%	14	41.2%	58.8%	0.0%	17
42	Psychology	1.14	75.4%	23.1%	1.5%	65	77.4%	22.6%	0.0%	62	78.9%	21.1%	0.0%	57
45	Social Sciences	1.14	77.8%	22.2%	0.0%	54	54.4%	43.9%	1.8%	57	60.5%	39.5%	0.0%	38
	Total		62.9%	36.8%	0.3%	577	59.7%	39.9%	0.4%	554	60.1%	39.0%	0.9%	539

Table A4: Example of CIP Mapping into SOU Major

SOU Major		CIP	CIP Description (abbreviated)
ART	Art and Art History	50	Visual and Performing Arts
BA	Business Administration	52	Business, Mgmt, Marketing, Related Support Svcs
BA	Business Administration	30	Multi/Interdisciplinary Studies
BIO	Biology	26	Biological and Biomedical Sciences
BIO	Biology(Master)	3	Natural Resources and Conservation
CHEM	Chemistry	40	Physical Sciences
COMM	Communication	9	Communication, Journalism
CIS	Computer Science	11	Computer and Information Science
CW	Creative Writing	23	English Language and Literature
CCJ	Criminology & Criminal Justice	43	Homeland Security, Law Enforce, Protective Services
ECON	Economics	45	Social Sciences and History
ED	Education	13	Education
EMDA	Emerging Media & Digital Arts	50	Visual and Performing Arts
ENG	English Writing	23	English Language and Literature
ES	Environmental Science and Policy	3	Natural Resources and Conservation
HPEL	Health, P.E., & Leadership	31	Parks, Rec, Leisure, Fitness Studies
HCA	Health Care Administration	51	Health Professions, Related Programs
HIST	History	54	History
IS	International Studies	30	Multi/Interdisciplinary Studies
MATH	Mathematics	27	Mathematics and Statistics

MATH	Mathematics	52	Business, Mgmt, Marketing, Related Support Svcs
MATH	Mathematics	30.08	Multi/Interdisciplinary Studies-STEM
MUS	Music	50	Visual and Performing Arts
MUS	Music	52	Business, Mgmt, Marketing, Related Support Svcs
NAS	Native American Studies	5	Area, Ethnic, Cultural, Gender, Group Studies
OAL	Outdoor Adventure and Leadership	31	Parks, Rec, Leisure, Fitness Studies
PHYS	Physics	40	Physical Sciences
POLS	Political Science	45	Social Sciences and History
PSY	Psychology	42	Psychology
PSY	Psychology(Master)	51	Health Professions, Related Programs
SOAN	Sociology and Anthropology	45	Social Sciences and History
THEA	Theater Arts	50	Visual and Performing Arts
UGS	Undergraduate Studies	30	Multi/Interdisciplinary Studies
WLL	World Languages and Cultures	16	Foreign Languages, Literatures, Linguistics

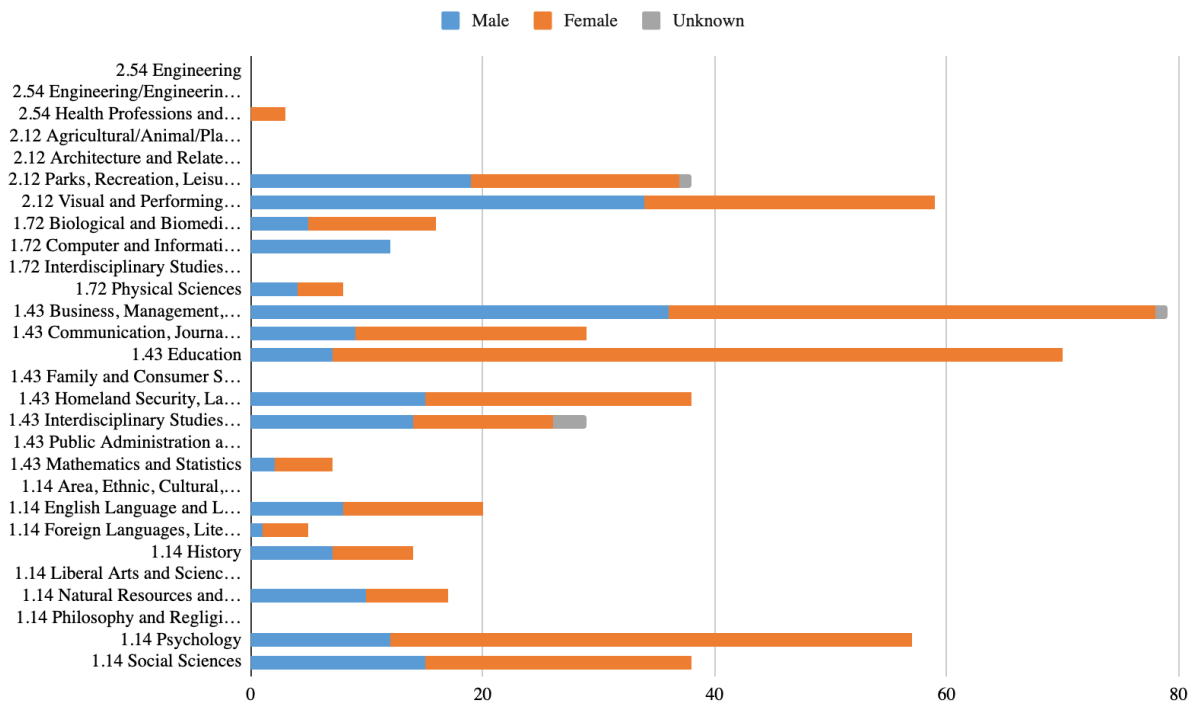


Figure A1. Degree Completions by Program and Gender, Ranked by Cost-Weight, SOU OR Residents only, AY 2018-2019

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