

Program Review: Developmental Mathematics
Dean's Response
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I would like to thank the program evaluation team (Dr. Andrea Garavito Martinez, Dr. Suzanne Mozdy, & Dr. Patrick Saxon) for their critical assessment of the Developmental Mathematics Program at Weber State University. I would also like to recognize Dr. Kathryn Van Wagoner (Program Director) and the faculty members in Dev Math for their self-study and their detailed response to the review team's extensive report.

I have thoroughly reviewed the program self-study, the program evaluation team's report and the Dev Math response to the review team's report. The review team highlighted many exceptional features of the developmental mathematics program and also delineated several recommendations. The dean's response provides commentary on observations and recommendations made by the program evaluation team as well as the Dev Math faculty response. The dean's response follows the organizational structure used by the program evaluation team in their program review report as the response from Dev Math also followed this organizational structure. I have also, as Dev Math did, lumped several small categories under the heading of Support (Advising).

Program Commendations:

While the review team ended their report with commendations, I prefer to begin my response with commendations, which are well-deserved and multiple.

- 1) "The program offers varying means for math preparation rather than a 'one size fits all' approach to developmental education.
- 2) The students we met described a math curriculum that was interesting and relevant to their lives and the disciplines they were interested in pursuing.
- 3) ...for its support of adjunct faculty. The adjunct faculty were happy with the mentoring and support provided by course leads.
- 4) The program director and advisor need to be commended, ...for their ability to think 'outside the box' to address challenges and barriers that historically marginalized students encounter.
- 5) All faculty, adjunct, and staff described having strong and positive relationships with leadership.
- 6) We commend the effective collaboration between the Developmental Math program and the Department of Mathematics in the realignment and redesign of Math 1010. It is evident through the work of the Math 1010 student outcomes and the sharing of teaching classes, that the relationship between the math department and developmental math program has benefitted from the current leadership direction of working together to solve common problems."

The dean agrees with these commendations and would like to thank the Dev Math Program Director and the faculty for their hard work in hammering out solutions to some difficult issues.

Programmatic Nature of Developmental Math (Faculty):

Several recommendations under this category revolved around elevating the developmental math program to a department housed within the College of Science (COS), with the budget for the program (or department) overseen by the dean of that college. The developmental math program director and

faculty agree with these recommendations. The dean is willing to discuss these recommendations along with alternative scenarios (not suggested by the review team) which may be better aligned with the best interests of the program faculty. One such alternative scenario could be the creation of a WSU General College administrative structure that would house all developmental courses and personnel (possibly within new departments). This could facilitate many of the review team's suggestions including their comment that "in light of the institutional goal of becoming a Hispanic Serving Institution. Ethnic minority students are likely to be over-represented in developmental education (Saxon, Slate, & Barnes, 2016). Improvements to instruction and support in developmental education will likely lead to improved outcomes for these students." The streamlining of outreach, advising, tutoring, and other services for developmental students under a General College structure seems like an opportunity worth considering. In addition, this administrative structure could provide support and incentives for current, non-tenured Developmental Math and English faculty to complete PhDs in order to compete for and attain tenure-track positions in these new departments. A General College structure may also allow for the suggestion by the Dev Math Program Director that "we could grandfather master's degree holders into the tenure track. This has been done in other universities."

I agree with the EDI recommendation and the Dev Math faculty response.

In summary, most of the specific recommendations made by the review team in this category must be addressed at the university administrative level. The multiple, comments by the program director about the impacts of low salary, and short-term contracts, on her faculty and on her ability to hire qualified instructors ought to be considered at this level as well.

Cohesiveness of Program (Student Learning Outcomes/Assessment):

Like the members of the review team, I have been very impressed, over the years, with the level of introspection and self-reflection, regarding teaching strategies and best practices, that the Dev Math faculty undertake. I recognize what the review team recognized, that "faculty felt that they were bearing the weight of student failure and that the narrative of the "at-risk" students' success was solely the problem of the developmental math program. This weight seems to be the point of (reason for) exhaustion and frustration for many full-time contracted faculty." The review team's suggestion of changing the Dev Math narrative, from a focus on failure to a focus on the successes that the Dev Math faculty have realized with their students, resonated with me. This single recommendation, if realized, could elevate the morale of the entire Dev Math team.

I do not agree with the review team's recommendation that "full-time faculty are trained on how to access, analyze/interpret, and/or generate data for assessment." I would suggest that one individual faculty member be given release time to be trained in these data utilization techniques and share findings with the others. Of course, once Dev Math faculty know how to access the data, they would be free to pursue any questions that they might have regarding student success.

Equity, Diversity, and Inclusion Lens to Data (Student Learning Outcomes and Assessment):

The individual to be trained in data utilization techniques (mentioned in the section directly above) could also assess and interpret the DFWI rates. The program director agrees that a DFWI assessment should be done, but also has a detailed response regarding Starfish which resonated with me.

The Dev Math program director felt that the review team's comments regarding Starfish were helpful and agreed that it would likely be in the best interests of the Dev Math faculty to participate in an additional Starfish workshop. Dev Math faculty noted that, while they see Starfish as an additional way

to reach students, they did not feel it was superior to their own internal efforts. “Since all our faculty diligently reach out directly to students at the first sign of trouble with course performance and/or attendance, we find Starfish to be just one more attempt at reaching students who are non-responsive to our attempts. We can invite a Starfish representative to meet with us again in the future to address any concerns on either side. Overall, we haven’t found Starfish to be more successful than our own internal efforts. From our experience, most flags are closed with no response from the student. Most, if not all, faculty use it regularly, but we can verify faculty knowledge and use of Starfish.” The dean agrees with the comments by the Dev Math faculty but, acknowledges (as the Dev Math faculty did) that multiple touch points, especially for struggling students, is a good thing.

Alignment to eHSI Strategic Plan (Relationships with Communities):

I would like to commend the many Dev Math faculty members who have already participated in ACUE courses on “Inclusive Teaching For Equitable Learning”. As Kathryn Van Wagoner noted, “Two faculty completed a 6-week course. Two completed a full-semester course. One or more are on track to complete the full-year course.” This is admirable and demonstrates the dedication of these faculty to student success and our WSU eHSI initiatives. I agree with the need to do DFWI assessments for all Dev Math students including those who are members of underrepresented groups, first generation etc.

Online Math Instruction (Curriculum/Faculty/Student Learning Outcomes and Assessment):

“The reviewers spoke to only one student taking a math course online. This informed our description and recommendations for online math instruction.” In the dean’s opinion, this entire section needs to be considered in light of the first sentence (above) in the review team’s report. The Dev Math faculty responded adequately to the recommendations made in this section. The specific recommendation that could be valuable, not only for Dev Math students, but all students across our university was to “assess and screen students for their ability and motivation to participate in an online mathematics course before approving their enrollment in an online section.” As the data shows, online courses can be a disaster for many students and a wonderful success for others. If students were assessed (as the review team recommends) and then advised based on risk of failure in an online format, we might realize greater overall student success in courses that offer different modes of teaching and learning. I do not know whether this has been done or is being done at other institutions, but certainly predictive models (classification/regression trees) could be developed for this.

Adjunct Faculty (Faculty):

Again, the Dev Math faculty response to the few recommendations in this section are adequate and cover the issues raised. In response to having adjuncts participate, the faculty note that “invitations to adjuncts to attend faculty meetings did not result in adjuncts attending faculty meetings. We can certainly renew the invitation. Adjuncts are invited to attend regional conferences at the expense of the department and one or two have done that. They receive the same invitations for professional development or other relevant campus events that full-time instructors receive.”

Integrated Student Success Supports (Support):

The dean notes that some of the review team’s discussion in this section has been previously covered in their report.

From the review team’s report, “The Culturally Responsive and Sustaining (CR-S) Framework outlines four principles and embedded strategies to help educators create student-centered learning environments that: affirm racial, linguistic, and cultural identities; prepare students for rigorous and independent learning; develop students’ abilities to connect across lines of difference; elevate

historically marginalized voices; and empower students as agents of social change.” The evaluation team’s suggestions regarding utilizing the (CR-S) framework are appreciated by the dean and the program director. As the program director stated, “We appreciate the information about the Culturally Responsive and Sustaining (CR-S) Framework and will include this and an asset-based approach in our fall professional development meeting. The program director has been seeking and learning from resources about writing culturally relevant curriculum, which has been implemented in the Math 1010 IEL curriculum. Additional resources on being culturally relevant are appreciated and will be utilized.”

There was some discussion in the review team report and the Dev Math faculty response report regarding Math 950 and Math 0810 with the evaluation team noting that when “visiting Math 810, the instructor, director, and advisor mentioned that it was a collaboration with the *Wildcat Scholars* program. One faculty member did describe teaching a section that was part of the Wildcat Scholars program and only 3 out of the 13 students passed the course. This faculty member mentioned contacting the program coordinator and advisor about the students in danger of failing but did not feel they were provided with sufficient or additional support on how to best support the students.” While the Dev Math faculty noted that the “purpose, mission, and goals of the Wildcat Scholar Math 0810 course does not align with the Dev Math philosophy of best practices for developmental math learning. Wildcat Scholars (WS) administration is specifically trying to get their students to bypass taking Math 0950 (or any other developmental math course) so they can enroll directly in Math 1035. Many Wildcat Scholars lack the student skills necessary to persist through difficulty in addition to lacking basic mathematics skills.” The dean suggests some additional communication between these two programs, as there seems to be some miscommunication or a lack of understanding about the goals of each program.

Support (Advising):

The Dev Math faculty have responded in detail and quite adequately to the recommendations provided by the review team in this section. In response to some recommendations about advising the Dev Math faculty replied that “as soon as registration opens, our advisor tracks students enrolled in Math 0950 who have no math placement, and communicates with them to provide any/all information they may need regarding placement and math paths. We make great efforts to encourage students to take math early in their college work, and have seen great improvements in recent years. We cannot force enrollment in our courses. Mandatory advising on campus would help this effort. Student self-advising hinders success.” The dean strongly agrees with the mandatory advising comments and agrees that student self-advising is not an effective strategy (for those students). The dean commends the Dev Math program faculty and the director for their communication efforts with students in Math 0950 and for their persistent work with all students encouraging them to take math early in their college career.

Recommendations for Continued Consideration and Improvement:

The dean agrees with the specific recommendations that the Program in Developmental Mathematics faculty have agreed to work on as outlined at the end of their response to the evaluation team’s review. The dean recognizes that the institutional recommendations will need further discussion.