Survey Results for Mathematics Corequsite Support Courses Fall 2020

Under the implementation of AB705, Citrus College made changes to the following transfer-level math courses: Calculus for Business and Social Sciences (MATH162 + 062), Introductory Statistics (MATH165 + 065), and Pre-Calculus (MATH175 + 075). These changes included students' placement in the math course sequence, classroom redesign, and pedagogy. The purpose of these changes was to increase completion of transfer-level math within a one-year timeframe. To better understand the student experience as a result of these modifications, students were surveyed about their experience in the redesigned corequiste support math courses during the fall 2020 semester. Additionally, due to the COVID-19 pandemic and the transition to remote learning we were interested in understanding students' experience in the remote learning environment. The following is a summary of the survey results.

| Survey results for fall 2020 corequsite math classes | MATH062 Total N=75 | MATH065 Total N=342 | MATH075 Total N=95 |
|---|--|------------------------|-----------------------|
| 2. How would you rate the helpfulness of each of the following teaching methods and materials used in this course before the campus closed? | % that rated it moderately or very helpful | | |
| 2a. Instructor's lectures | 93.3% | 94.4% | 83.2% |
| 2b. Working in groups | 46.7% | 67.5% | 58.9% |
| 2c. Quality of materials provided (e.g. worksheets, PowerPoint presentations, etc.) | 92.0% | 92.7% | 86.3% |
| 2d. Diversity of format for the content delivered (e.g. video, audio, online, etc.) | - | - | - |
| 2e. Workbook | - | - | - |
| 2f. Textbook | - | - | - |
| 2g. Calculator | - | - | - |
| 2h. Manipulatives (e.g. dice, coins, cards, etc.) | - | - | - |
| 2i. Whiteboard | - | - | - |
| 2j. Movable furniture | - | - | - |
| 2k. Counselor Visit | - | - | - |

| 2l. STEM Center Visit (in class) | - | - | - |
|--|--|-------|-------|
| 2m. Zoom share screen and Zoom whiteboard | 86.7% | 92.4% | 84.2% |
| 3. How would you rate the helpfulness of each of the following teaching methods and materials used in this course after the campus closed? | % that rated it moderately or very helpful | | |
| 3a. Working in groups (Zoom breakout rooms) | - | | - |

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|---|--|------------------------|-----------------------|
| 3b. Diversity of format for the content delivered in Zoom (e.g. class activity, project, video, audio, online, etc.) | 88.0% | 91.5% | 85.3% |
| 4. During this semester, how often did you use: | % that used it at least once | | |
| 4a. Virtual Instructor Office Hours (including via email, WebAssign, Connect, MyOpenMath, MyMathLab) | 52.0% | 56.8% | |
| 4b. Virtual STEM Center tutor (one-on-one) | 5.3% | 18.7% | 13.7% |
| 4c. Virtual STEM Center tutor (study group) | 6.7% | 15.8% | 13.7% |
| 5. How would you rate the helpfulness of: | % that rated it moderately or very helpful | | |
| 5a. In-class tutor (before the campus closed) | - | - | - |
| 5b. Virtual STEM Center tutor (one-on-one) | 18.7% | 28.1% | 26.3% |
| 5c. Virtual STEM Center tutor (study group) | 18.7% | 26.3% | 28.4% |
| 6. How much do you agree or disagree with the following statements (in the online environment)? | % that rated agree or strongly agree | | |
| 6a. The instructor's lectures were effective in helping me learn in the online environment. | 93.3% | 92.4% | 81.1% |
| 6b. Diversity of content (e.g. class activity, project, video, audio, etc.) were effective in helping me learn in the online environment. | 85.3% | 92.7% | 81.1% |
| 6c. My instructor helped me succeed in the online environment by reviewing foundations skills right before we tackled more complex problems. | 90.7% | 92.4% | 83.2% |
| 6d. Group work (i.e. working with peers in Zoom breakout rooms) was effective in helping me learn in the online environment. | 50.7% | 69.6% | 57.9% |
| 6e. Working in the Canvas Discussion Boards with my peers was effective in helping me learn in the online environment. | 53.3% | 61.4% | 56.8% |
| 6f. Working with the Zoom share screen and Zoom whiteboard with my peers was effective in helping me learn in the online environment. | 72.0% | 84.8% | 72.6% |
| 6g. The collaborative learning environment is one reason I participated in Zoom sessions and breakout rooms. | 58.7% | 77.5% | 60.0% |

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| 6h. Having tables arranged in groups was effective in helping me learn (before the campus closed). | - | - | - |
| 6i. I gained a sense of community by being in the online environment. | 53.3% | 72.2% | 67.4% |
| 6j. I gained a sense of responsibility by being in the online environment. | 73.3% | 81.0% | 72.6% |
| 6k. I gained a sense of belonging to my class as a learning community in the online environment. | 57.3% | 77.2% | 65.3% |
| 7. Which of the following best captures your feeling about this course? | % that chose each answer (% that were successful in the course) | | |
| 7a.This course is too easy for me. | 2.7% (100%) | 2.9% (100%) | 2.1% (100%) |
| 7b. This course is the right level for me. | 76.0% (100%) | 82.5% (92%) | 81.1% (90%) |
| 7c. This course is too difficult for me. | 18.7% (67%) | 11.1% (52%) | 12.6% (<mark>83%)</mark> |
| 8. When offered, how often did you participate in the Zoom meetings? | % that chose each answer | | |
| 8a. Always | 34.7% | 44.4% | 48.4% |
| 8b. Sometimes | 46.7% | 42.7% | 28.4% |
| 8c. Never | 8.0% | 7.3% | 15.8% |
| 8d. Not offered in these courses | 8.0% | 2.0% | 3.2% |
| 9. Which type of remote learning environment do you prefer? | % that chose each answer | | |
| 9a. Asynchronous instruction | 26.7% | 14.9% | 20.0% |
| 9b. Synchronous instruction | 22.7% | 28.7% | 17.9% |

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|--|------------|-------------|------------|
| | Total N=75 | Total N=342 | Total N=95 |
| 9c. Combination instruction | 45.3% | 52.0% | 55.8% |

| Results of STEM Center Usage and Helpfulness by students who used the STEM Center | MATH062 Total N=75 | MATH065 Total N=342 | MATH075 Total N=95 |
|---|--|------------------------|-----------------------|
| 4. During this semester, how often did you use: | % that used it at least once | | |
| 4b. Virtual STEM Center tutor (one-on-one) | 5.3% | 18.7% | 13.7% |
| 4c. Virtual STEM Center tutor (study group) | 6.7% | 15.8% | 13.7% |
| 5. How would you rate the helpfulness of: filtered by students who used the STEM Center | % that rated it moderately or very helpful | | |
| 5b. Virtual STEM Center tutor (one-on-one) | 25.0% | 78.1% | 84.6% |
| 5c. Virtual STEM Center tutor (study group) | 60.0% | 64.8% | 69.3% |