**Instructional Components, Student Behaviors, and Student Characteristics Related to Perceptions of Online Course Experiences**


## Abstract

The purpose of this study was to provide information about online student characteristics and courses to guide instructional programs, support services planning and decision-making. A sample of 1,805 San Diego Community College District (SDCCD) fully online students answered 52 close- and open-ended DETA (Distance Education and Technological Advancements) questions about instructional characteristics, student behaviors and perceptions, learner characteristics, and student learning experiences. The results revealed student characteristics and course components related to student experiences in online courses. This information will help identify support services for online students and help with the evaluation of course components that impact online student learning.


## Introduction

The San Diego Community College District (SDCCD) collaborated with the University of Wisconsin-Milwaukee National Research Center for Distance Education and Technological Advancements (DETA), with the goal of fostering student access and success through evidence-based online learning practices and technologies. The purpose of this study was to provide information about online student characteristics and courses to guide instructional programs, support services planning and decision-making. The information will be used to identify needed support services for online students and to evaluate the course components that impact online student outcomes. The two research questions were: 1) Which educational components (e.g., content, interactivity) impact student learning; and 2) Which patterns of behaviors lead to increased student learning for different populations?

## Methods

The DETA online student survey was administered by the SDCCD Office of Institutional Research and Planning in Spring 2016 to a random sample of students enrolled in fully online credit courses at San Diego City College, San Diego Mesa College, and San Diego Miramar College. Students were stratified by college and then randomly selected. This design was intended to provide representativeness and to allow for generalizing the results to the fully online student population, herein referred to as students or online students. A pre-notification and two reminder emails were sent to increase response rate. The survey was administered online only. The survey questions were selected from a pool of questions provided by DETA, and included 45 close-ended questions and seven open-ended questions regarding instructional characteristics, student behaviors and perceptions,

learner characteristics, and perceived student learning outcomes. These dimensions were not tested for validity so were merely groupings, rather than constructs. A total of 1,805 students completed the survey.

**Results**

Correlation and multiple regression analyses were conducted to examine the relationships between instructional characteristics, student behaviors/perceptions, and learner characteristics with the DETA student learning outcomes (DETA SLOs): 1) students' course experiences helped them do better on exams and assignments; 2) the class activities helped them receive a better grade; and 3) the class was beneficial to their learning. The open-ended responses were also analyzed (see Tables 1-7).

The correlation results demonstrated moderate, positive relationships between instructional characteristics and DETA SLOs (see Table 8). The strongest, positive relationship was found between course organization and students' perceived learning ($r = 0.528$). Further analyses demonstrated that course resources, including relevant course tools and media, and current instructional materials contributed to positive DETA SLOs. DETA SLOs were also positively impacted by course organization, incorporation of learning activities that facilitate and support active learning, and graded assignments that were varied and appropriately timed. Additionally, results showed that explanation of interaction requirements, explanation of grading expectations, a clear relationship between the course materials and activities, inclusion of easily accessible technologies, and support in completing activities were related to more positive DETA SLOs.

Correlation results demonstrated positive relationships between student behaviors and perceptions, and DETA SLOs (see Table 9). Moderate, positive relationships were found between reading behavior and students' perception that the course experiences helped them on exams and assignments ($r = 0.615$); perception that the class activities helped them get a better grade ($r = 0.551$); and perception that the class was beneficial to learning ($r = 0.472$). Additional analyses revealed that DETA SLOs were positively influenced by students' comfort interacting with others in the course; feeling validated by others during course interactions; and engaging in active and collaborative learning experiences.

Learner characteristics showed weak to moderate positive relationships with the DETA SLOs (see Table 10). Student motivation was positively related to the perception that the class was beneficial to learning ($r = .485$), and the perception that the course experiences helped on exams and assignments ($r = .483$). Further analyses revealed that motivation produced by online activities, self-discipline,

valuing instructor feedback, having meaningful conversations with other students, and a preference for working remotely positively impacted the DETA SLOs.

**Conclusion**

Results showed that course organization, inclusion of relevant and accessible course tools, activities that support learning, current instructional materials, graded assignments, and adequate support were instructional characteristics related to students' course experiences. Additionally, clear interaction requirements, grading expectations, and relationship between course materials and activities were influential to student perceptions of their online course experience. Student comments suggested that an instructor can ensure that students do not feel alone in the online environment by providing consistent presence and feedback to students and by providing students with a time frame for answering emails. Students also indicated that an online course should be designed to have an intuitive and clear structure so that they can easily navigate the materials and anticipate upcoming deadlines.

Finally, results showed that student behaviors such as reading for the course, conducting Internet research, and engaging in collaborative learning activities were positively related to their perceptions of online class experience. Communication with the instructor and having validating interactions were also related to positive learning experiences. Students who were more comfortable interacting with others in the course reported more positive learning outcomes. Furthermore, traits including motivation, self-discipline, and organization were positively related to students' online learning experiences. Students' online learning perceptions were also impacted by motivation, self-discipline, valuing instructor feedback, engaging in meaningful conversations with students, and preference to work remotely. Student comments indicated that they appreciated the flexibility and convenience of an online course, and often mentioned the value of time management and previous online course experience. Students especially felt that they could be successful in the online classroom if they had previous Blackboard experience and knowledge of where to get help. The following recommendations are based on the findings:

1. Additional professional development opportunities should be considered to keep instructors up to date on current online tools and best pedagogical practices for online learners.
2. It may also be beneficial to provide online students with additional resources that would allow them to learn or improve upon the skills (e.g., time management, organization, online communication) and knowledge (e.g., available online college services, Blackboard utilities) essential to succeed in online courses.

## Appendix

Table 1

*Why did you choose to take this course in the mode you did rather than as a completely traditional face-to-face course?*

| Theme | Count | % |
|---|---|---|
| Time/Full-time | 750 | 55% |
| Work | 548 | 40% |
| Online/Engaged | 426 | 31% |
| Schedule/Busy | 421 | 31% |
| Convenience | 152 | 11% |
| Children/At Home/Family | 122 | 9% |
| Fit | 108 | 8% |
| Course was Available | 69 | 5% |
| Flexibility | 55 | 4% |
| Commute | 49 | 4% |
| My Own Pace | 34 | 3% |
| Easier Time Management | 7 | <1% |

Table 2

*Which of your skills or experience were most helpful in preparing you for this course? Please explain.*

| Theme | Count | % |
|---|---|---|
| Time Management | 383 | 30% |
| Computers/Literacy/Savvy/Technology | 317 | 25% |
| Research/Skills | 281 | 22% |
| Prior Knowledge/Already Taken/Other Online | 270 | 21% |
| Read/Reading | 254 | 20% |
| Online Courses | 253 | 20% |
| Self/Motivate/Independence | 186 | 14% |
| Knowledge/Knowing | 110 | 9% |
| Organize/Schedule | 90 | 7% |
| Familiar/Comfortable | 48 | 4% |
| Programming | 12 | <1% |
| Dedication to Degree | 12 | <1% |

Table 3

*What practices can an instructor implement in order to help you succeed in an online course?*

| Theme | Count | % |
|---|---|---|
| Student/Instructor/Interaction | 545 | 43% |
| Clear Assignments | 175 | 14% |
| Communicate with Faculty | 170 | 13% |
| Utilize Technology/Videos | 132 | 10% |
| Feedback/Evaluation | 110 | 9% |
| Answer Student Questions | 65 | 5% |
| Better Communication | 65 | 5% |
| Better Instructions | 61 | 5% |
| Syllabus Clarity | 60 | 5% |
| Be Available | 50 | 4% |
| Due Date Reminders | 48 | 4% |
| Increase Use/Relevance of Discussion Board | 32 | 3% |
| Problems | 19 | 2% |

Table 4

*Think of a time in which you've taken an online course. Explain an experience that influenced your learning.*

| Theme | Count | % |
|---|---|---|
| Resources/Course/Book | 418 | 36% |
| Time/Manage | 265 | 23% |
| Group Discussion/Forum Classmates/Feedback/Interact/Response/Chat/Communicate/ Convenient | 246 | 21% |
| Course Organization | 190 | 16% |
| Videos/Skype/Stimulating/Strict/Recorded Lecture | 111 | 10% |
| Examples/Show | 37 | 3% |
| 24/7 Access to Course | 13 | 1% |

Table 5

*What are the necessary components of a good online course?*

| Theme | Count | % |
|---|---|---|
| Clear/Clarity | 353 | 29% |
| Instructor/Teacher | 337 | 28% |
| Communication/Discussion Board | 286 | 23% |
| Interaction/Explain/Timely | 268 | 22% |
| Deadlines/Due Dates/Expectations | 152 | 12% |
| Materials | 152 | 12% |
| Syllabus/Require | 150 | 12% |
| Organization/Structure | 113 | 9% |
| Clear Instructions/Lesson Plans | 105 | 9% |
| Schedule/Calendar | 99 | 8% |
| Access/Accessibility | 81 | 7% |
| Video(s) | 73 | 6% |
| Feedback | 67 | 6% |
| Instructor/Available | 28 | 2% |

Table 6

*What do you do, if anything, to prepare yourself to take online courses?*

| Theme | Count | % |
|---|---|---|
| Quiet Time/Study | 339 | 29% |
| Organize/Materials/Place to Study | 192 | 16% |
| Check Schedule/Due Dates | 182 | 16% |
| Read/Print Syllabus | 151 | 13% |
| Check Computer/Connection Internet/Printing | 148 | 13% |
| Check Assignments | 129 | 11% |
| Check/Due Dates | 120 | 10% |
| Review Class Schedule | 107 | 9% |
| Manage/Dedicate/ Set Specific Time to Study | 77 | 7% |
| Get Notebook for Notes | 59 | 5% |
| Check Blackboard Site | 40 | 3% |
| Get Textbook | 38 | 3% |
| Ask Questions | 27 | 2% |
| Not Fall Behind | 11 | <1% |

Table 7

*What experiences or traits help you to be successful in online courses?*

| Theme | Count | % |
|---|---|---|
| Time/Management | 466 | 40% |
| Organize | 164 | 14% |
| Be Motivated | 121 | 10% |
| Do Assignments | 84 | 7% |
| Use Computer | 64 | 5% |
| Study/Be Consistent | 63 | 5% |
| Be Determined | 44 | 4% |
| Keep on Track/Schedule | 39 | 3% |
| Be Independent | 35 | 3% |
| Stay on Task/Track/Top/Schedule | 25 | 2% |
| Be Pro-Active | 21 | 2% |
| Technology Savvy | 17 | 1% |
| Be Prepared | 16 | 1% |
| Pay Attention | 13 | 1% |

Table 8.

*Correlation between Instructional Characteristics and DETA SLOs.*

| DETA SLOs | Adequate support completing activities | Tools and media relevant to learning | Learning activities facilitated & supported learning | Course organized in logical format |
|---|---|---|---|---|
| 1) Course Experiences Helped on Exams & Assignments | .469** | .486** | .485** | .467** |
| 2) Class Activities Helped Get a Better Grade | .465** | .450** | .479** | .436** |
| 3) Class was Beneficial to Learning | .474** | .521** | .473** | .528** |

*Note.* A weak correlation coefficient is r = 0.1, moderate is r = 0.4, and strong is r = 0.7.
** $p < 0.01$ (2-tailed).

Table 9.

*Correlation between Student Behaviors/Perceptions and DETA SLOs.*

| DETA SLOs | Did a significant amount of reading | Engaged in a lot of communication with instructor | Often conducted internet research | Course interactions are validating | Active and collaborative learning experiences |
|---|---|---|---|---|---|
| 1) Course Experiences Helped on Exams & Assignments | .615** | .333** | .351** | .436** | .496** |
| 2) Class Activities Helped Get a Better Grade | .551** | .273** | .321** | .414** | .478** |
| 3) Class was Beneficial to Learning | .472** | .231** | .281** | .353** | .405** |

*Note.* A weak correlation coefficient is r = 0.1, moderate is r = 0.4, and strong is r = 0.7.
** p < 0.01 (2-tailed).

Table 10.

*Correlation between Learner Characteristics and DETA SLOs.*

| DETA SLOs | Keep notes in logical order | Tools and media relevant to learning | Learning activities facilitated & supported learning |
|---|---|---|---|
| 1) Course Experiences Helped on Exams & Assignments | .266** | .483** | .304** |
| 2) Class Activities Helped Get a Better Grade | .241** | .409** | .254** |
| 3) Class was Beneficial to Learning | .230** | .485** | .301** |

*Note.* A weak correlation coefficient is r = 0.1, moderate is r = 0.4, and strong is r = 0.7.
** p < 0.01 (2-tailed).