

Product Name MyPsychLab/MyVirtualChild*
 Course Name Child Development
 Credit Hours Three

Key Results Students who used MyVirtualChild scored significantly higher on exams compared to those students who did not use the program.

Course Learning Goals

1. Explain normal physical, cognitive, social, and emotional changes from conception to adolescence and the influences of culture, race, religion, socioeconomic status, and gender on these processes.
2. Take into account differences in development related to community and family issues, substance abuse, giftedness, and developmental disabilities.
3. Apply knowledge of development to real-life experiences and problems.
4. Practice communication skills, both oral and written.

Implementation

In 2011, I redesigned my child development course with the goal of improving student learning outcomes while actively engaging students with course material. To that end, I implemented the online simulation MyVirtualChild in which students make parental decisions that shape their virtual child's development from birth through age 18 and receive feedback on the impact of those parenting decisions as their child ages.

Course redesign goal

The goal of this study was to determine the efficacy of MyVirtualChild versus a traditional printed textbook.

Study participants and structure

Study participants were the 100 students who registered for my Child Development course from fall 2010 through spring 2012.

Four classes were combined to form two comparison groups of 50 students each—the first two used a traditional textbook (*Child Development* by Patterson, 2007, McGraw-Hill) and the other two used MyVirtualChild with only minimal supplemental text readings (about 35 pages total).

Method

Both qualitative data (student perception of MyVirtualChild) and quantitative data (student performance on class exams) were assessed to determine whether or not (1) student learning in the course increased as a result of using MyVirtualChild, and (2) students engaged with the program and perceived it as beneficial to their understanding of class material.

Exams. Three noncumulative exams were given in each of the four class sections. All exams used the same format (40 multiple choice and five short answer questions), were worth a total of 50 points, and assessed factual, conceptual, and applied knowledge. The results of the first exam and the average of the results of the second and third exams were analyzed. This grouping was chosen because when the switch to MyVirtualChild was made, the order of the material presented in class was adjusted slightly to parallel the presentation of material in the program. The adjustment did not affect exam 1, which covered the same material for all semesters. However, some material covered by exams 2 and 3 did shift, so some sections originally covered on one test were moved to the other. The average score from exams 2 and 3 was used in the analyses so that the comparison was based on the same content.

Student survey for MyVirtualChild class sections. Three open-ended questions were given to students in the MyVirtualChild sections. I constructed coding categories for each of these questions. Two independent reviewers coded student responses into appropriate categories.

Assessments

MyVirtualChild Sections

66.7 percent Three exams (150 total points)
 33.3 percent Three papers (75 total points)

Sections without MyVirtual Child

75 percent Three exams (150 total points)
 25 percent One paper (50 points)

*MyVirtualChild is both a feature within MyPsychLab and a standalone product.

| | Mean (SD) | F | df | p |
|-------------------------------|--------------|------|-------|-------|
| Exam 1 | | .062 | 1, 98 | ns |
| Textbook Group | — | | | |
| MyVirtualChild Group | — | | | |
| Exams 2 and 3 Combined | | 6.50 | 1, 97 | .012* |
| Textbook Group | 37.09 (4.91) | | | |
| MyVirtualChild Group | 39.58 (4.81) | | | |

Table 1. Exam Score Differences: Traditional Textbook versus MyVirtualChild, out of a Total of 50 Points (ns=not significant, *= $p < .05$)

Results and Data

Results revealed that students using MyVirtualChild earned significantly higher exam scores than students in sections using a textbook.

There were no significant differences for exam 1, however students using MyVirtualChild showed a significantly higher average score for exams 2 and 3 than students using a traditional textbook. These findings show that students in the MyVirtualChild group displayed better exam performance on the material that overlapped with the MyVirtualChild program than students using a textbook that covered the same material (table 1).

The Student Experience

Students felt that MyVirtualChild helped them learn class material (figure 1). Measures of student performance support this perception.

Students using MyVirtualChild reported that it helped them relate to class material. They found MyVirtualChild more engaging and interactive than a textbook and believed that it helped them to connect course material to the real world.

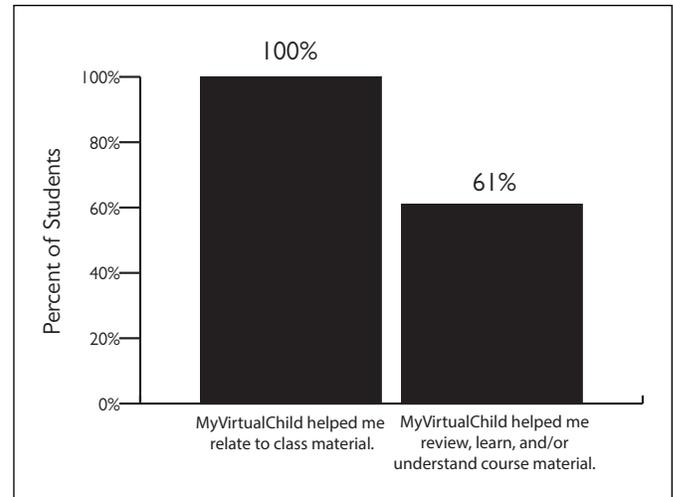


Figure 1. Student Survey Responses, Spring 2012 (n=31)

Conclusion

Scores on exams covering material corresponding to MyVirtualChild were significantly higher for those students using MyVirtualChild than they were for students using a traditional textbook. Using MyVirtualChild to teach child development in lieu of a textbook but with similar in-class information was found to increase student engagement and lead to more active learning in the classroom.

References

Laura K. Zimmermann (2013) Using a Virtual Simulation Program to Teach Child Development, *College Teaching*, 61:4, 138-142, DOI: 10.1080/87567555.2013.817377

For more detailed information on Dr. Zimmermann's research, see the complete study online, at the Routledge Taylor & Francis Group website (<http://www.tandfonline.com/doi/abs/10.1080/87567555.2013.817377#.UnPa43CsiSq>).

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