

# Assessing Students' Preparedness for College Reading through the Blackboard LMS

Victoria M. Rey

General Studies, College of Liberal Arts, Kean University, New Jersey, USA

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**Abstract:** To determine the incoming college students' preparedness for reading before the pandemic, several post-secondary institutions used the Accuplacer test and other multiple measures. On March 11, 2020, the World Health Organization declared COVID-19 a pandemic (CDC Museum COVID-19 Timeline). Due to the limitations of administering the Accuplacer test during the pandemic, Kean University, USA used the Departmental Reading Test. Incoming first-year students who were placed in a Developmental Reading course based on the evaluation of their transcript of records and GPA took this test on the Blackboard Learning Management System (LMS). This study investigated the difference between the course placements of students before and after they had taken the Departmental Reading test, the advantages and disadvantages of taking the Departmental Reading Test during the first week of classes and before the start of the term, and the effects of administering the Departmental Reading Test on the Blackboard Learning Management System (LMS). Some students qualified to skip Developmental Reading courses in Fall 2020 and Fall 2021 after they had taken this test. There were more advantages of taking this test before the start of classes than during the first week of the term. Taking the test on the Blackboard LMS was very helpful to the test administrators, faculty, and students. Using the Departmental Reading Test in addition to other multiple measures to determine the students' Developmental Reading course placements was helpful.

**Key Word:** Assessment, Blackboard LMS, college reading, reading preparedness, remedial reading, reading test, developmental reading

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## I. Introduction

According to the National Center for Education Statistics, millions of first-year students who attend post-secondary institutions in the United States every year are academically underprepared (Chen, 2016). They lack the necessary skills in reading, writing, and math to perform in college-level programs. To address this problem, several post-secondary institutions require students to attend remedial intervention programs, sometimes called developmental education courses. Some students at Kean University, USA take 2 levels of Developmental Reading courses such as CS 0409: Basic Reading Skills (Level I) and CS 0412: Introduction to Academic Reading (Level II). Before the pandemic, students in this university were placed in these courses based on their scores on the Accuplacer Reading test and an evaluation of their school transcript of records, GPA, and other measures. This test assessed the test taker's ability to derive meaning from a range of texts and to determine the meaning of words and phrases in short and extended contexts. Passages on the test covered a range of content areas, writing modes, and complexities. Both single and paired passages were included. This test assessed knowledge and skills that included information, ideas, rhetoric, synthesis, and vocabulary (<https://accuplacer.collegeboard.org/educators/whats-on-tests>).

Due to the challenges and limitations of administering the Accuplacer test during the pandemic, students at Kean University took the Departmental Reading test on the Blackboard Learning Management System (LMS) in Fall 2020 and Fall 2021. A group of faculty chaired by the researcher had previously developed and piloted this test. This test measures the students' proficiency in vocabulary and comprehension. It consists of passages and questions based on stated and suggested information and reading skill applications. College students use these skills in meeting the reading demands in college and reading different types of materials. (Rey, 2020). Questions in this test considered the Common Core anchor standards and high school grade-specific standards. These standards work in tandem to define college and career readiness expectations (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010).

## Blackboard LMS

During the pandemic, several institutions across the world relied on the Blackboard LMS and other online learning management systems in providing learning experiences to students. Instructors used these platforms to provide instruction, engage students, assign work, and post grades. Students were able to submit

assignments, take exams, and monitor grades. Several faculty at Kean University, USA used the Blackboard LMS as a teaching-learning platform. This enabled the faculty to deliver teaching and learning experiences to learners and educators to achieve their goals (<https://www.blackboard.com/teaching-learning/learning-management>). Several students benefited from using this learning system before and during the pandemic. Alokuk (2018) reviewed the effectiveness of the Blackboard system. He concluded that Blackboard promoted pedagogical gains because this system provided a collaborative and user-friendly environment for teaching-learning in terms of communication and assessment. Similarly, Al-khresheh (2022) analyzed the literature on Blackboard and other learning management systems. He indicated that EFL classes were positively influenced when Blackboard technology was utilized. AlShaya and AlHidari (2015) reported that the faculty at Princess Noura University decided to adopt Blackboard as a learning management system after having a positive attitude toward this program. In a study on the benefits of Blackboard, Chawdhry (2011) reported that the students ranked the ability to readily check grades 24/7 as the most beneficial feature of this LMS. To gain insight into the purpose for and practice of online tests at the Charles Darwin University (CDU) Business School in Australia, Stack, A; Boitshwarelo, B; Reedy, A; Billany, T; Reedy, H; Sharma, R; & Vemuri, J. (2020) examined the data from Blackboard Learn. They reported that the faculty were able to use the Blackboard LMS for formative and summative tests. Ilyas (2018) also cited the benefits of using the Blackboard Management system in delivering remote classroom instruction.

### **Testing**

Hughes & Scott-Clayton, 2011) stated that more research on the effectiveness of using multiple measures for academic placement, as well as guidance on the potential uses of the non-cognitive assessments, is certainly needed. Most colleges offer some innovative models of developmental education, such as learning communities, accelerated coursework, or the mainstreaming of underprepared students into college courses with extra support. Since some of these models require additional effort or commitment from students, multiple measures could be useful to colleges matching students to particular programs. Chung & Boyd (2015) reported the use of the institutional placement test to advise students on appropriate English as a second language (ESL) writing and/or pronunciation service courses at the University of Illinois at Urbana-Champaign (UIUC). The English Placement Test (EPT) was used to assess the English ability of newly admitted international undergraduate and graduate students as validated against the English language demands of the campus.

### **Purpose of the Research**

Due to the challenges during the pandemic, students at Kean University, USA, took the Departmental Reading Test instead of the usual Accuplacer test. They took it on the Blackboard Learning Management System in Fall 2020 and Fall 2021. In addition to the GPA and school records, this test helped determine the students who needed help with preparedness for college reading. It is very important to investigate the effect of this test on the student's initial course placements and on taking this test on the Blackboard LMS. This will guide the researcher, faculty, and course placement staff in making decisions for reasonable course placements of students in Developmental Reading classes at Kean University and test selection and administration. This study investigated the difference between the course placements of students before and after they had taken the Departmental Reading Test, the advantages and disadvantages of administering this test on the Blackboard LMS, and the difference between the results of taking this test before the start of the term and during the first week of classes. Specifically, this study answered the following questions.

1. Was there a difference between the student's initial and the final Developmental course placements after taking the Departmental Reading test?
2. What were the effects of administering the Departmental Reading Test on the first week of the term and before the start of the term?
3. What were the effects of administering the Departmental Reading Test on the Blackboard Learning Management System?

## **II. Material and Methods**

To achieve the objectives of this study, I used descriptive and quantitative methods in collecting, analyzing, and interpreting the data. During the pandemic in Fall 2020, some incoming students were placed in Developmental Reading or reading improvement courses such as CS 0409: Basic Reading Skills (Level I) and CS 0412: Introduction to Academic Reading (Level II), after an evaluation of their transcript of records and GPA. Before the pandemic, students were placed in these courses based on their test scores on the Accuplacer and other measures. Due to the limitations of administering this test, students took the Departmental Reading Test that the Developmental Reading faculty had developed and piloted. I posted this test on the Blackboard LMS. I explained to the faculty who taught these courses how to guide their students to take this test on Blackboard during the first week of classes in Fall 2020. I collected a list of their students' scores. These scores

were used to determine the students who would stay or get exempted from taking one or both of these courses. I analyzed the differences between the lists of students' initial and final placements in these Developmental Reading courses and the reasons for the exemptions of some students from taking one or both of these courses. Faculty advisors guided students who got exempted from any of these courses or both to drop the initial course and change it to the next level of Developmental Reading or college credit courses. I noted my observations on the differences between the number of students in all these classes before and after the students have taken this test. I also analyzed my observations when faculty advisors helped students who got exempted from this course in dropping CS 0409 or CS 0412.

In Fall 2021, I administered the Departmental Reading Test before the start of this term to students who were placed in CS 0409: Basic Reading Skills and CS 0412: Introduction to Academic Reading. An advisor worked with me in helping students who got exempted from this course in changing it to the next Developmental Reading or college credit course. An academic specialist helped the students to finalize their registration for Fall 2021. I contrasted the number of students who took the test and who skipped the developmental reading courses in Fall 2020 and Fall 2021. The data for both terms were tabulated and interpreted. I recorded the effects of the test results on class enrollment, advisement, and students' course choices after they have taken the test before and during the first week of classes. I also analyzed the effects of taking the Departmental Reading Test on Blackboard.

### Participants

A total of 755 incoming college freshman students registered in two levels of Developmental Reading courses such as CS 0409: Basic Reading Skills (Level I) and CS 0412: Introduction to Academic Reading (Level II) at Kean University, USA, in Fall 2020 and Fall 2021 were included in this study. There were more students who were placed in CS 0412, Level II Developmental Reading course than in CS 0409, Level I. One hundred forty-three students were initially placed in CS 0409 while 612 were advised to take CS 0412. There were more students who registered in Developmental Reading courses in Fall 2020 than in Fall 2021. All classes in Fall 2020 were held remotely while those in 2021 were held remotely and face-to-face.

**Table 1: Participants in the study**

Course	Term	No.	%
CS 0409: Basic Reading Skills	Fall 2020	94	12
CS 0409: Basic Reading Skills	Fall 2021	49	7
CS 0412: Introduction to Academic Reading	Fall 2020	322	43
CS 0412: Introduction to Academic Reading	Fall 20201	290	38
Total		755	100

### III. Result

#### Students' course placement before and after taking the departmental reading test

Table 2 shows that 94 students were placed in CS 0409: Basic Reading Skills in Fall 2020. After taking the Departmental Reading test during the first week of classes, 14% of them got exempted from taking this course and moved to the next-level course, CS 0412: Introduction to Academic Reading. Thirteen percent were qualified to skip both CS 0409 and CS 0412 courses. There was no change in the course placements of 73 % of the students who registered in the Basic Reading Skill course. In Fall 2021, 49 students registered in CS 0409. Nine percent of the students moved to the Introduction to Academic Reading course while 22% got exempted from taking both Developmental Reading courses. Sixty-nine percent stayed in CS 0409 in Fall 2021. There were more students who registered in Fall 2020 than in Fall 2021.

**Table 2: Students' course placements in CS 0409: Basic skills (Level 1)**

Students	Fall 2020		Fall 2021	
	No.	%	No.	%
Stayed in level 1 (Basic Reading Skills)	69	73	34	69
Moved to level 2 (Introduction to Academic Reading)	13	14	4	9
Exempted from Levels 1 & 2	12	13	11	22
Total	94	100	49	100

Table 3 shows that 322 students were placed in CS 0412: Introduction to Academic Reading in Fall 2020. After taking the Departmental Reading test during the first week of classes, 16 % of them got exempted from taking this course and took another course. Eighty-four percent stayed in the course. In Fall 2021, 290

students registered in CS 0412. Eighty-nine percent stayed in this course while 11 % got exempted from taking it. More students stayed in CS 0412 in Fall 2021 than in Fall 2020

**Table 3: Students' course placements in CS 0412: Introduction to academic reading (Level 2)**

Students	Fall 2020		Fall 2021	
	No.	%	No	%
Stayed in level 2 (Introduction to Academic Reading)	271	84	258	89
Exempted from taking Level 2	51	16	32	11
Total	322	100	290	100

**Effects of taking the departmental reading test during the first week and before the start of the term**

In Fall 2020, the faculty administered the Departmental Reading Test on Blackboard in their classes. Table 4 shows that 100 % of the students who registered in CS 0409: Basic Reading Skills and CS 0412: Introduction to Academic Reading course took the test. Both faculty and students learned the result of the test after the students had taken it. Students were also able to know if they would stay in the class or skip it. Students who got exempted from taking this class due to their scores on the test were advised to take another course. Since students were qualified to drop the course, the enrollment in some classes decreased and became lower than the allowed number of students. Also, students had limited choices for replacement courses because several classes were full. Several faculty advisors helped students to drop CS 0409 or CS 0412 and take another course.

The lessons learned in 2020 guided the personnel involved in determining the test administration process and student advisements in Fall 2021. I was assigned to take charge of administering the Departmental Reading test on Blackboard in June 2021. The Testing and Placement Center periodically sent me the list of students who were initially placed in CS 0409 and CS 0412 after an evaluation of students' transcripts of records and other school credentials. I invited all students who registered in these classes to take the Departmental test. Fifty-five percent of the registered students in these classes took the Departmental Reading test. I recorded and informed them of their scores and any change in course placement. One advisor and an academic specialist assisted students who got exempted from taking any or both courses to select appropriate course replacements. The enrollment in each section of the Developmental Reading courses was within the acceptable number of students.

There were no reported complaints from students regarding their placements in Developmental Reading courses in Fall 2020 and Fall 2021. Before the pandemic, some students complained that they did not understand the reason for taking these classes.

Table 4 shows that more students registered in Fall 2020 than in Fall 2021. All of the students who registered in Fall 2020 took the Diagnostic Reading Test for a chance to skip CS 0409: Basic Reading Skills or CS 0412: Introduction to Academic Reading while 55% took this test before the start of Fall 2021.

**Table 4: Students' participation in the departmental test**

Students	Fall 2020		Fall 2021	
	No.	%	No	%
Took the Departmental Test	416	100	188	55
Did not take the test	0	0	151	45
Total	416	100	339	100

**Effects of taking the departmental reading test on students' course placements**

Table 5 shows that there was a difference between students' initial and final course placements in both Levels 1 and 2 Developmental Reading courses in Fall 2020 and 2021. Some students got exempted from these courses.

**Table 5: Students' initial and final placements**

Students	Fall 2020			Fall 2021		
	Initial	Final	Difference	Initial	Final	Difference
Stayed in Level 1	94	69	25	49	34	15
Stayed in Level 11	322	271	51	290	258	32

Total	416	340	77	339	292	47
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#### **IV. Discussion**

##### **Students' course placement before and after taking the departmental reading test**

Some of the students' course placements in both CS 0409: Basic Reading Skills and CS 0412: Introduction to Academic Reading, Developmental Reading courses in the Fall 2020 and Fall 2021 semesters changed. These included exemptions from taking CS 0409 (Level 1) and both CS 0409 and CS 0412 (Level II) Some students who have been initially placed in CS 0412: Introduction to Academic Reading qualified to skip this course. The Departmental Test was used as one of the determinants for placing students in Developmental Reading classes. Before the pandemic, many colleges found using multiple pieces of information to determine course placements in Developmental Education or remedial courses helpful (Barnett, E., Bergman, P., Kopko, E., Reddy, V., Belfield, C., Roy, S., 2018), Although some students got exempted from taking CS 0409 and CS 0412, more students who stayed in the course appeared to have a need for a Developmental or remedial reading course. In fall 2020, 69 % stayed in Fall 2020 and 2021 while 84% stayed in CS 0412 in Fall 2020 and 89% in Fall 2021. It appears that those who stayed needed to improve their inferential and critical comprehension skills. The Departmental Reading Test included items that measured literal, inferential, and critical reading skills. Rey (2020) explained that in the literal level of comprehension, students identify given information in passages. Students read between the lines and figure out what a passage suggests in making inferences. Literal and inferential comprehension skills help the students to go beyond what a passage states and suggests. Students analyze and synthesize passages to identify arguments and make conclusions with relevant and substantive support. Cabasan (2011) examined the reading comprehension levels of freshman education students and found that there were more students who needed help in reading. Six percent of the students were within the independent level. De-la-Peña and Luque-Rojas (2021) in their comparison of studies of university students' levels of reading comprehension reported that a significantly higher proportion of students showed an optimal level of literal understanding than the inferential and critical levels of reading comprehension.

##### **Effects of taking the departmental reading test in the first week and before the start of the term**

In Fall 2020, the faculty administered the Departmental Reading Test on Blackboard to their students who registered in CS 0409: Basic Reading Skills or CS 0412: Introduction to Academic Reading during the first week of classes. All of the students took the test. In Fall 2021, the researcher invited the students who registered to take the test between June and August on Blackboard. Since students were given a choice to take or miss the test, some of them did not take the test.

Several faculty advisors helped students who got exempted from taking CS 0409: Basic Reading Skills or CS 0412: Introduction to Academic Reading to register for another course in Fall 2020. Some students had limited choices for course replacements because several classes were full. Since some students were qualified to drop the course, the enrollment in some Developmental Reading classes was lower than the allowed number of students. Also, some students missed the first day of classes in the replacement course because they took the Departmental Reading Test during the first week of classes.

The lessons learned in 2020 guided the personnel involved in determining the test administration process and student advisements in Fall 2021. I took charge of the test administration on Blackboard. Fifty-five percent of the registered students in these classes took the Departmental Reading test while forty-five percent did not take the test for a chance to skip the Developmental Reading course. Some of them indicated that they were not interested in taking this test. This may be attributed to their awareness of their reading comprehension skills. Greci (2019) reported that many students are lacking self-confidence in their reading skills that are necessary to read independently because they feel unprepared or somewhat prepared for college reading.

One advisor and an academic specialist assisted students who got exempted from taking any or both courses to select appropriate course replacements in Fall 2021. The enrollment in each section of the Developmental Reading courses was within the acceptable number of students during this term. There were more choices for replacement courses for students who got exempted from taking the Developmental Reading in Fall 2021 than in Fall 2020. Students in Fall 2021 had more choices for selecting replacement courses because they took the test before the start of the semester.

##### **Effects of administering the departmental reading test on the blackboard learning management system**

Before the pandemic, many colleges found using multiple pieces of information to determine course placements in Developmental Education or remedial courses All the faculty who taught Developmental Reading courses in Fall 2020 were able to administer the Developmental reading Test on Blackboard. Students took it and see their scores right after submission. They knew the reason for staying and skipping this course. In Fall 2021, I invited students to take the Departmental Reading Test on Blackboard. I gave them instructions on taking this test. These instructions were helpful to both faculty and students. Shanmugasundaram &

Chidamabaram (2020) indicated in their recommendations that the Blackboard administration team must provide extensive training to both learners and staff in terms of usage.

Giving students who have been placed in Developmental Reading courses a chance to take the Departmental Reading Test was helpful. Some students were thankful for this opportunity. Some students qualified to skip these courses. There were also no complaints about taking the Developmental Reading classes. All students were given a chance to take this test that gave them a chance to skip these courses. Before the pandemic, several students did not understand the reason for attending these classes. Some students felt stigmatized for having to attend a Developmental Reading or a remedial course and frustrated for not getting college credits and paying tuition for attending this course (Rey & Karstadt, 2006, Bettinger & Long, 2007 & Bailey, Jeong, & Cho, 2010)

## V. Conclusion

Before the pandemic, some students at Kean University, USA were advised to take Developmental Reading courses such as CS 0409: Basic Reading Skills (Level I) and CS 0412: Introduction to Academic Reading (Level II) based on SAT scores, high school transcript of records, and the Accuplacer test. Due to the challenges during the pandemic, students at Kean University took the Departmental Reading test instead of the usual Accuplacer test. They took this test on the Blackboard Learning Management System in Fall 2020 and Fall 2021. A group of instructors and I previously developed and piloted this test. This measures the students' proficiency in vocabulary and comprehension. It consists of passages and questions based on stated and suggested information and reading skill applications. This study investigated the difference between the course placements of students before and after they had taken the Departmental Reading test, the advantages and disadvantages of taking this test during the first week of classes and before the start of the term, and the effects of taking this test on the Blackboard LMS.

There was a change in the course placements of some students after they had taken the Departmental Reading Test. Students who were initially placed in Level 1 or Level 2 of the Developmental Reading courses got exempted from taking this course. Taking the test before the start of the term was more advantageous than taking it during the first week of classes. Taking the test on Blackboard during the pandemic was helpful to test administrators, faculty, and students. The results of this study showed that using multiple measures to determine final students' Developmental Reading placement courses was helpful. A Departmental Reading Test in addition to the high school transcript of records and the GPA benefited students because some got exempted from taking Developmental Reading courses. Students understood the reason for their placements in these courses. A departmental test developed and piloted by faculty may be a reasonable alternative for a standardized test.

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