

Here is some useful
background info
(not just for Russian)
about how the
CAPE works.

TEST MANUAL

for the

R-CAPE

(A Russian Computerized Adaptive Placement Exam)
Windows Version

Written

by

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Windows Version 1.2

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R-CAPE

(A Russian Computerized Adaptive Placement Exam)

1.0 - General Information and Background

Each semester language departments are faced with the task of advising and placing students into appropriate courses. Often this decision is based upon the number of classes the student has previously taken in the language. However, this approach does not take into account several factors, such as the effectiveness of the teacher(s), the specific information covered, extracurricular or other out-of-class exposure to the language, and, in general, the student's actual facility with the language.

Testing each student before placement has been difficult since an adequate placement test traditionally has required a significant amount of time—about two to two and a half hours for a fairly thorough placement exam—and a lot of coordination effort, i.e., arranging testing times and places, administering tests, scoring answer sheets, recording and reporting the results, and finally counseling with the students.

Because of these testing constraints and concerns, the R-CAPE was developed. This computer adaptive placement exam for Russian dramatically reduces testing time (to approximately 20 to 30 minutes for most students), eliminates the hassle of handling and keeping track of test booklets and answer sheets, and provides immediate placement feedback to the students and advisors. The adaptive capability of the R-CAPE program causes the computer to present questions that are at the approximate level of ability of the examinees. This greatly reduces the boredom associated with being forced to answer questions that are far too easy and the frustration resulting from being exposed to questions that are far too difficult. The first six questions function as "checks," serving to determine the examinee's approximate performance level; questions thereafter "fine tune" the measurement. The first six questions span the difficulty continuum and are used to give an initial estimate of the student's ability; thereafter, the computer presents items of

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increasing difficulty until an item is missed. It then gives an item easier than the previous one. If the examinee responds correctly, the exam will give him/her a more difficult item. This process continues until the examinee has reached a placement score with a standard error of .40 or less.

Obviously, the key to the success of this type of exam is the scaling of the test items along a difficulty/ability continuum. The items on this test were calibrated using the Rasch measurement model. (For more information about this statistical model, see Benjamin D. Wright and Mark H. Stone, *Best Test Design: Rasch Measurement*. Chicago: Mesa Press, 1979.)

1.1 - Hardware Requirements

The R-CAPE program will run best on a 486 or faster computer. The following minimum configuration is recommended:

80486 processor,

4 megabytes of RAM,

A total of 7 megabytes of hard disk storage space, [2 megabytes for the test files and 5 megabytes for the ToolBook runtime files],

VGA video running 640x480 resolution with 256 colors,
keyboard,

mouse or other pointing device,

Windows 3.x or Windows 95.

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Russian COMPUTER ADAPTIVE PLACEMENT EXAM REPORT*

Jane Jones 576560823 Date: 9/7/95

Time started: 11:16 AM

Russian language background:

Studied in high school.

Years: 2

High School: Timpview

City: Provo

Currently enrolled in Russian 101

Right Wrong	Correct Answer	Student Answer	Logit Level	Item Number	Item Type
1	A	A	-2.36	11043	R
0	B	A	-1.53	52016	G
0	D	C	-0.99	51150	G
0	C	B	0.88	51072	G
0	A	C	0.62	52002	R
0	A	D	2.71	21089	V
1	C	C	-2.42	51048	V
1	C	C	-1.99	51052	R
0	D	A	-1.57	41144	V
1	D	D	-2.01	41139	G
0	A	D	-1.67	12020	R
0	A	D	-1.93	51113	V
0	D	C	-2.21	12054	G
1	D	D	-2.36	11055	V
1	C	C	-2.09	51045	V
0	B	C	-1.97	52049	R
0	C	A	-2.20	32077	G
0	A	B	-2.31	32004	G
1	C	C	-2.63	11037	R
0	B	D	-2.30	51042	R
0	B	D	-2.73	12021	R
1	A	A	-2.73	11115	R
1	C	C	-2.42	51128	G
1	B	B	-2.36	11051	V
0	B	C	-2.23	51101	R
1	C	C	-2.40	22023	V
1	A	A	-2.27	32018	G
0	C	A	-2.09	52035	R
0	C	A	-2.34	22054	R

Final Placement Score: 125

Test completed at 11:32 AM

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In the student test report, you are provided with the student's name, ID number, date, time started, language background. During the test the following information is provided about each test item:

Right or Wrong: 1 if the item was answered correctly and 0 if answered incorrectly

Correct Answer: The letter for the correct answer

Student Answer: The letter selected by the student

Logit Level: The negative or positive value that indicates the items relative difficulty. The larger the negative value, the easier the item and the larger the positive value, the more difficult the item.

Item Number: Refers to the original item number in the test data bank. It also refers to the original paper and pencil test item number.

Item Type: Indicates the item type such as Reading, Vocabulary, Grammar. If a student misses most of the Reading items, for example, perhaps the student is having reading comprehension problems.

At the end of the test, a placement score is given based on the ability estimate of the student. Scores above 640 are above the placement range of the test and would indicate that the student is more proficient in the language than this test was designed to measure. The time completed is also indicated.

The data on test items is provided for those teachers who wish to do further analysis of students' test performance. We realize that many may not use this data, but we wish to provide it for those who are doing research on performance related to problems with reading, grammar, or vocabulary.

After the last student has finished the test and you want to print out the students' test results, click on the **Exit Test** button. This will return you to the desktop. You may then view or print out their reports using the **ReadData** program, or any word processing program or text file editor

NOTE: In an emergency you can exit the program in progress at any time by pressing **Alt-F4**. (See Section 2.6: "Exiting a Test in Progress.")

3.0 - Printing hard copy of student test results

Print the test results stored on the data disk by using a word processor. The test report is a text file (ASCII file) and may be viewed or printed by opening the *ReadData* program (explained in next section) or may be retrieved into any word processor.

4.0 - Screen display of student test results

To look at student test results, open the program, *ReadData*. It will allow you to open a student's data file and read it or print it. Remember, the student's data file is named with the first four letters of the last name and the last four characters of the ID number followed by .Rus, for example, JONE0823.Rus.

5.0 - Determining Individual School Course Placement Scores

The R-CAPE was designed to assist in the placement of students into the first three semesters of college-level Russian (i.e., Russian 101, 102, and 201) or to determine when a student should enroll in a course beyond the 201 level. After piloting the test with several hundred students from these courses at Brigham Young University, ability coefficients, or cutoff points, as determined by the test, were determined for each course. Since these cutoff points pertain to BYU's students and curriculum, they are not necessarily valid for other schools' programs. Therefore, it is important that other schools/departments using the test determine the cutoff points that correspond to the courses in their own Russian language program. To do so, administer the test to 40-50 students from each course level, plotting the placement scores for all students at each level. (It is imperative that these pilot students indeed belong in their respective courses.) After the distribution of scores has been plotted, it is then possible to determine the minimum scores that should be attained by future examinees in order to be placed into those courses. Over the next several administrations of the test, these cutoff points may be adjusted as seems necessary.

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A word of caution: There is no perfect placement test. So, it is advisable that you be somewhat flexible in counseling students as to which courses they should enter. For example, if students place just below the cutoff score for the next higher class, you might counsel them to enroll in the more advanced course, explaining that it is very possible for them to succeed, if they are willing to put forth a little extra effort.

For your information and reference. As an aid to determining cutoff points for their own Russian program, several users have requested the cutoff points used for placement at Brigham Young University. *It should be clearly understood that these scores may vary considerably from students' scores in your Russian curriculum;* nevertheless, if they are helpful, please use them.

The following ranges of scores are used for placement purposes at BYU:

<u>Course</u>	<u>Scores</u>
Russian 101:	0 - 249
Russian 102:	250-424
Russian 201:	425-525
Russian 300:	526 and up

These scores are based on a calculated ability estimate. That calculated value is then converted to a placement score ranging from 0 to 600+. If a student's ability is above the range of the test, the placement scores could range as high as 700-800, but the standard error on these values would be quite high. The test is only designed for placement into the first two years of a college or university language.