

**Mt. San Jacinto College
ACCUPLACER Consequential-Related Validity Study
Spring 2012**

**Prepared for:
Mt. San Jacinto
Matriculation
Office**

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Executive Summary

1. Math Perceptions

- a. Students Perception – 75% feel they are correctly placed by Accuplacer, 20% feel they should have placed higher
- b. Faculty Perception – 72% of student are correctly placed by Accuplacer

2. English Perceptions

- a. Student Perception – 72% feel they are correctly placed by Accuplacer, 26% feel they should have placed higher.
- b. Faculty Perception – 79% of students are correctly placed by Accuplacer

3. Reading Perceptions

- a. Student Perception – 74% feel they are correctly placed by Accuplacer, 24% feel they should be higher.

4. Analysis

- a. Students Perceptions – For Math the 75% endorsement level was met for Accuplacer assessment. For English and Reading the 75% endorsement level was not met, with a large percentage of students believing they should have been placed into a higher course.
- b. Faculty Perceptions - *Due to human and technological errors, the faculty survey is not a valid measure to determine Accuplacer assessment, students were unable to be uniquely identified and placed into the assessed or matriculated groups*.

5. Recommendation

- a. Follow up with success rate analysis of assessed students compared to matriculated students.
- b. Unable get valid data from faculty with the Class-Climate online survey. Recommend to develop a paper survey and select random classes to survey.

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Introduction

Under matriculation regulations established by Title 5, California Code of Regulations, Mt. San Jacinto College (MSJC) must demonstrate that the measures used to place students into English, Math, and Reading courses are valid. The California Community College Chancellor's Office (CCC) has set specific Standards, Policies and Procedures for the evaluation of assessment instruments.

Mt. San Jacinto College currently uses the Accuplacer assessment test to assist in the placement of students into English, Math, and Reading courses. To validate the use of this instrument, the college conducted a study to review evidence of the AccuPlacer consequential-related validity.

The CCC standard that must be met is at least 75% affirmative endorsement by students and at least 75% judgment of proper placement by instructors. The following two Standards established by the California Community Colleges (CCC) were addressed:

- A. *After the start of the semester, how do students whose test scores placed them into a specific course evaluate the appropriateness of their placement? (Standard is at least 75% affirmative endorsement by students.)*

- B. *After the start of the semester, how do instructors evaluate individual students as to the appropriateness of their test score placement into a specific course? (Standard is at least 75% judgment of proper placement by instructors.)*

During the Spring-2012 semester, the Research and Planning Department at MSJC created and administered student and faculty surveys to address the two Standards above.

This report is organized into two parts. Part A includes a description of the methods and results of the student survey used to assess their placement based on Accuplacer results. Part B describes the methods and results of the faculty survey designed to capture the judgment of faculty regarding student readiness levels. The use of Class-Climate as a new survey tool did not allow for instructors to uniquely identify students, which becomes problematic when analyzing instructor's perceptions of student readiness. Because we were not able to uniquely identify the students which were rates by instructors, we are unable to get an accurate measure of instructors' perceptions of placed students. We were only able to survey the instructors' perceptions on the entire class, and are unable to distinguish the two groups of placed students and matriculated students. Part B is included, but does not meet the requirements to validate the Accuplacer.

PART A: Student Evaluations of Placement

Method

Participants

Mt. San Jacinto uses the Accuplacer to place students into the following courses:

ENGLISH COURSES	MATH COURSES	READING COURSES
ENGL-61	Math-050	READ-063
ENGL-62	Math-051	READ-064
ENGL-95	Math-090	READ-098
ENGL-98	Math-96	
ENGL-101	Math-105	
ENGL-103	Math-110	
ENGL-104	Math-115	
ENGL-106		
ENGL-130		

Students enrolled in the courses served by the Accuplacer were asked to participate in the study. A unique link to an online survey was sent to students' MSJC email account for each course they assessed into. (Appendix A contains a sample of the survey used for the student participants). Although all students in the selected courses were surveyed for the analysis **only students who were placed by the Accuplacer** into the specific course where used for the analysis of this study.

For the English Student Survey a total of 903 students were surveyed of that amount Accuplacer placed 364 students into their English course. For the Reading Student Survey a total of 61 students were surveyed and of that amount Accuplacer placed 50 students into their Reading course. For the Math Student Survey a total of 1115 students were surveyed of that amount Accuplacer placed 434 students into their Math course.

The Standards set by the California Community Colleges require a minimum sample size of 50 individuals in studies to determine the reliability estimates. The number of participants in this current study is sufficient to determine the reliability of estimates.

Procedures

A list of student's emails was generated for all students enrolled in English, Math, & Reading sections for Spring 12. The online survey was emailed to every student on the list. Instructors were sent an email informing them of the survey process and asked the instructor to

encourage the students in their class to participate in the online survey. After the survey administration was completed, the research and planning department entered the data into a statistical database where the data was analyzed.

Analysis

The CCC has established a Standard of at least 75% affirmative endorsement by students regarding the adequacy of placement into a specific course based on the results of their assessment. To test whether or not students placed by AccuPlacer, felt that they were enrolled in the proper course, statistical software was used to analyze the student responses to the survey question about enrollment in a particular course. The survey asked the students two questions, the questions read:

Question 1:

“How did you meet the prerequisite for this class?”

- *My placement test placed me at this level.*
- *I passed the course required for enrollment (prerequisite) in this course.*
- *I took the course required for enrollment in this course (prerequisite) at another college.*
- *I wanted to take a lower division course to review or practice my skills*
- *I challenged my placement decision, and was put in this course level.*
- *I am repeating this course*

Question 2:

“Which sentence best describes you?”

- *I should have enrolled in a lower course—I was not prepared for this level of difficulty.*
- *I belong in this course—this course is about the right level of difficulty for me.*
- *I should have been placed in a higher course—I have already learned this material.*

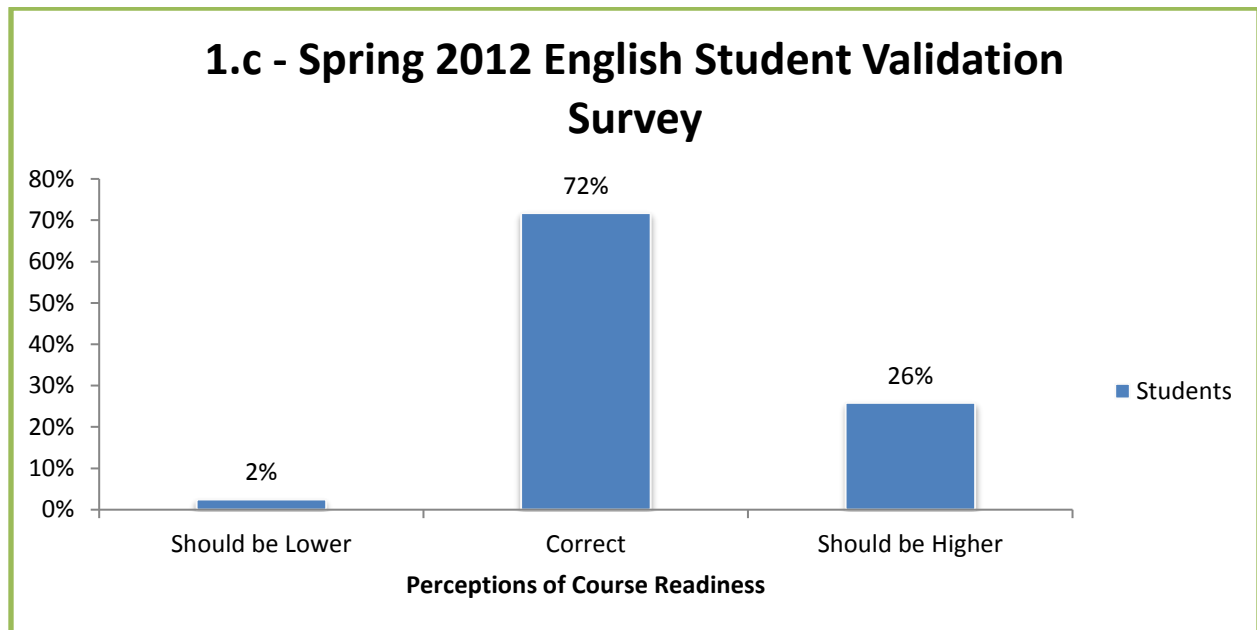
Note: During the analysis of the student data, students who responded to question number one with “my placement test placed me at this level” were the only students who were selected for the current study.

Results

Tables 1 - a, b, & c present the results of the analysis for student's perception of their placement in English. The data shows that of the 364 students reporting that AccuPlacer placed them into their English course, 72% felt that they belonged in the course.

Table 1.a Percentage of Students			
Student Perception English Placement			
Course	Belong Lower	Correct	Belong Higher
ENGL-061	6%	59%	34%
ENGL-062	1%	60%	39%
ENGL-095	0%	75%	25%
ENGL-098	3%	73%	24%
ENGL-101	1%	89%	9%
ENGL-103	0%	67%	33%
ENGL-104	0%	50%	50%
ENGL-106	0%	100%	0%
ENGL-130	0%	100%	0%
Total	2%	72%	26%

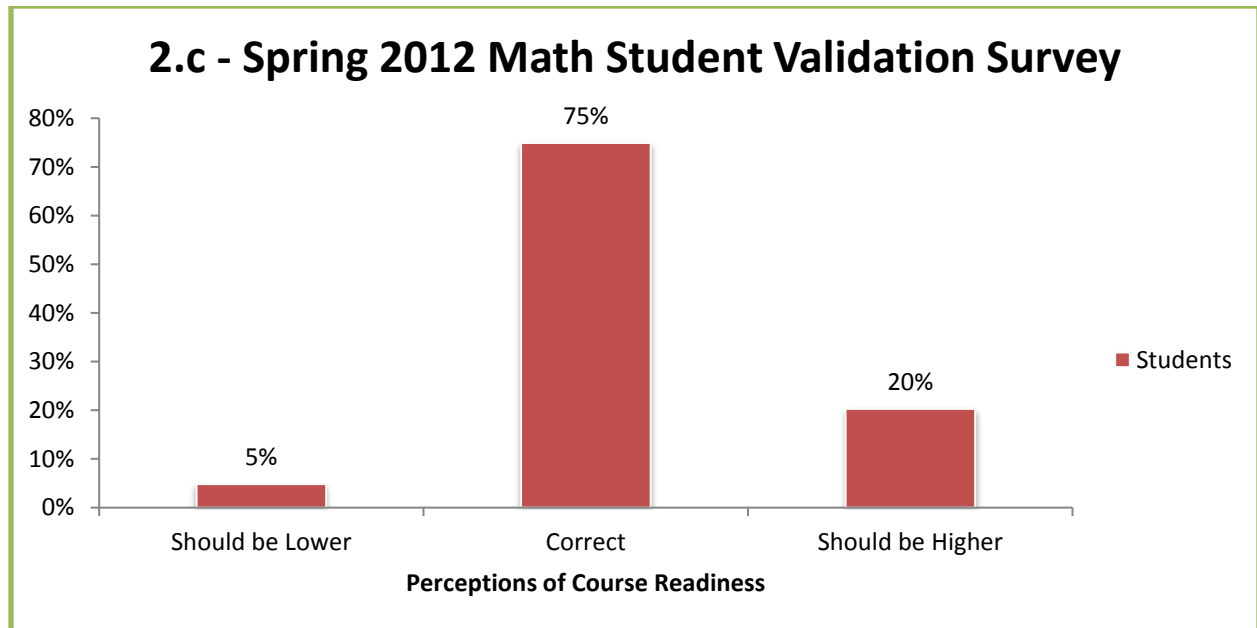
Table 1.b Number of Students				
Student Perception English Placement				
Course	Belong Lower	Correct	Belong Higher	Total
ENGL-061	2	19	11	32
ENGL-062	1	50	33	84
ENGL-095	0	3	1	4
ENGL-098	5	116	39	160
ENGL-101	1	67	7	75
ENGL-103	0	2	1	3
ENGL-104	0	2	2	4
ENGL-106	0	1	0	1
ENGL-130	0	1	0	1
Total	9	261	94	364



Tables 2 – a, b, & c presents the results of the analysis for student’s perception of their placement in Math. Review of the table shows that of the 434 students reporting that AccuPlacer placed them into their math class, 75% felt that they belonged in the class.

Table 2.a Percentage of Students			
Student Perception Math Placement			
Course	Belong Lower	Correct	Belong Higher
Math-050	1%	79%	19%
Math-051	4%	79%	17%
Math-090	3%	78%	19%
Math-96	9%	68%	23%
Math-105	7%	71%	21%
Math-110	0%	50%	50%
Math-115	0%	100%	0%
Total	5%	75%	20%

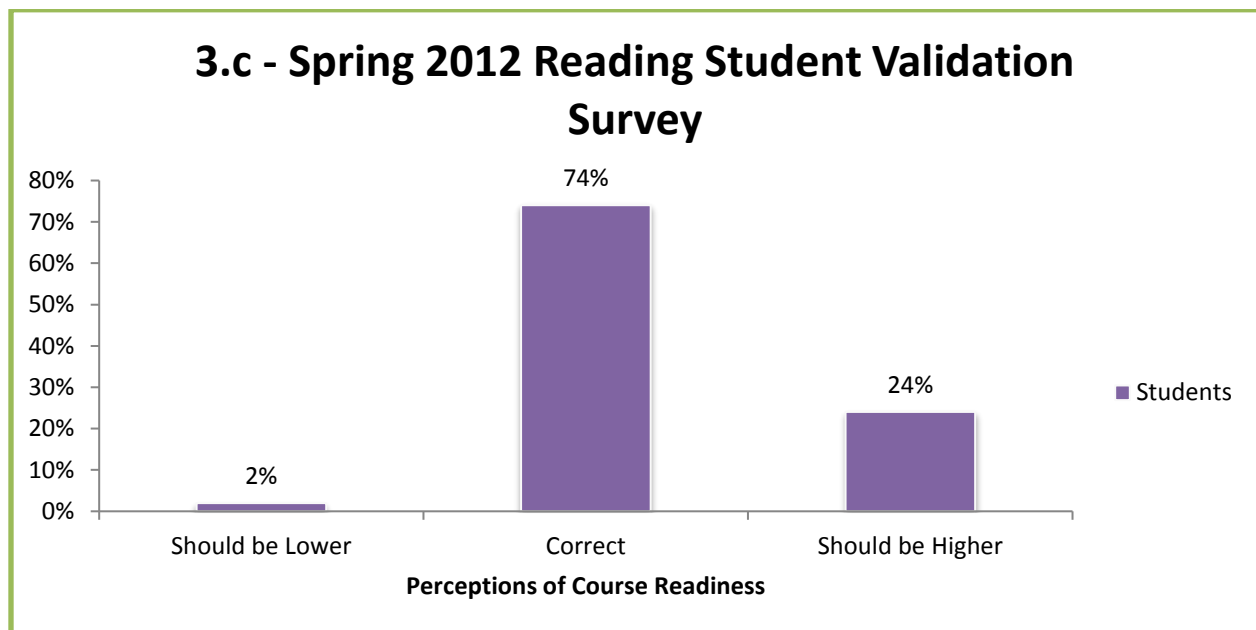
Table 2.b Number of Students				
Student Perception Math Placement				
Course	Belong Lower	Correct	Belong Higher	Total
Math-050	1	53	13	67
Math-051	3	56	12	71
Math-090	4	104	25	133
Math-96	11	86	29	126
Math-105	2	20	6	28
Math-110	0	3	3	6
Math-115	0	3	0	3
Total	21	325	88	434



Tables 3 - a, b, & c shows the results of the analysis for the student's perception of their placement in Reading. Of the 50 students reporting that AccuPlacer placed them into their reading class, 74% believed that they belonged in the course.

Student Perception Reading Placement			
Course	Belong Lower	Correct	Belong Higher
Read-063	7%	79%	14%
Read-064	0%	74%	26%
Read-098	0%	0%	100%
Total	2%	74%	24%

Student Perception Reading Placement				
Course	Belong Lower	Correct	Belong Higher	Total
Read-063	1	11	2	14
Read-064	0	26	9	35
Read-098	0	0	1	1
Total	1	37	12	50



Part A Conclusions

The results of Part A demonstrate that for the Spring 2012 validation survey, between 72% and 75% of students believe they are correctly placed, 20% to 26% believe they belong in a higher course, while only 2% to 5% believe they should have been placed lower by the Accuplacer. For Math the percentage of students who believe they are correctly placed equals the CCC standard of 75%. For Reading and English, the percentage of students who believe they are correctly placed is slightly lower than the CCC standard of 75%. The variance from the standard of 75% for Reading and English is most likely due to students over estimating their readiness level, as supported by Instructor perceptions of student readiness levels in Part B of this report. Recommend a success rate analysis of placed students, which will provide a more objective measure of student readiness. Also, if the Accuplacer is correctly placing students, then there should be no discernible difference between students who placed into a course and students who passed the prerequisites for a course. Recommend comparing readiness perceptions of

placed students to students who passed the prerequisites for a course to determine if there is a difference between the perceptions of the two groups. If the two groups' perceptions of readiness are equal, it would be an indication of an accurate placement test.

PART B: Faculty Judgment of Student Placement

Method

Participants

Faculty members teaching courses served by AccuPlacer during the Spring-2012 semester were asked to participate in the study. Surveys were sent through email to each participating faculty member.

For English Faculty members rated 1733 students. Math Faculty they rated 1839 students. Reading Faculty rated 3 students, due to low participation of Reading Faculty. To achieve a greater participation rate from students and faculty in any future survey, a paper survey rather than online survey may be a better mode of delivery. Although, with the online survey we have a sample which should be indicative of the entire population and using a paper survey to capture a larger sample may not be worth the time and effort required. The results from a larger sample with a paper survey should yield similar results to this online survey. In future surveys it may be best to target ESL and READING students and instructors for a paper survey while using the online mode for ENGLISH and MATH.

Procedures

Instructors were contacted concerning the data collection efforts and asked to make a judgment as to the preparedness of each individual student enrolled in their course. Instructors rated each student on a 4-point scale from; 1. - belong lower, 2. - Correctly placed, 3. - belong higher, 4. - Unknown. The number 4 variable 'unknown' was added to determine if instructors feel as though they could make an informed assessment of their students at the time of the survey. There were a few comments from instructors paraphrased as "I have not had time to assess students yet ...students have not taken any tests yetlater in the term I will be able to make a better assessment ... etc..."

Due to this survey being the first trial run of a new online survey method, instructors were asked to rate all the students in their classes. The analysis of instructor perceptions on student readiness, include all students not just Accuplacer students. In a future survey it would be necessary to distinguish between the two groups of students, as was done in the student's survey. The current online survey method may not be the best option for instructor surveys, as uniquely identifying students in the instructor's online survey was not accomplished. Recommend developing a paper survey for both students and instructors to be distributed to each

class participating or if possible develop the online survey to distinguish between the two groups of students. Ideally if the Accuplacer is correctly placing students, there should be no discernible difference between students who were placed into a course and students who passed the prerequisites for a course.

Analysis

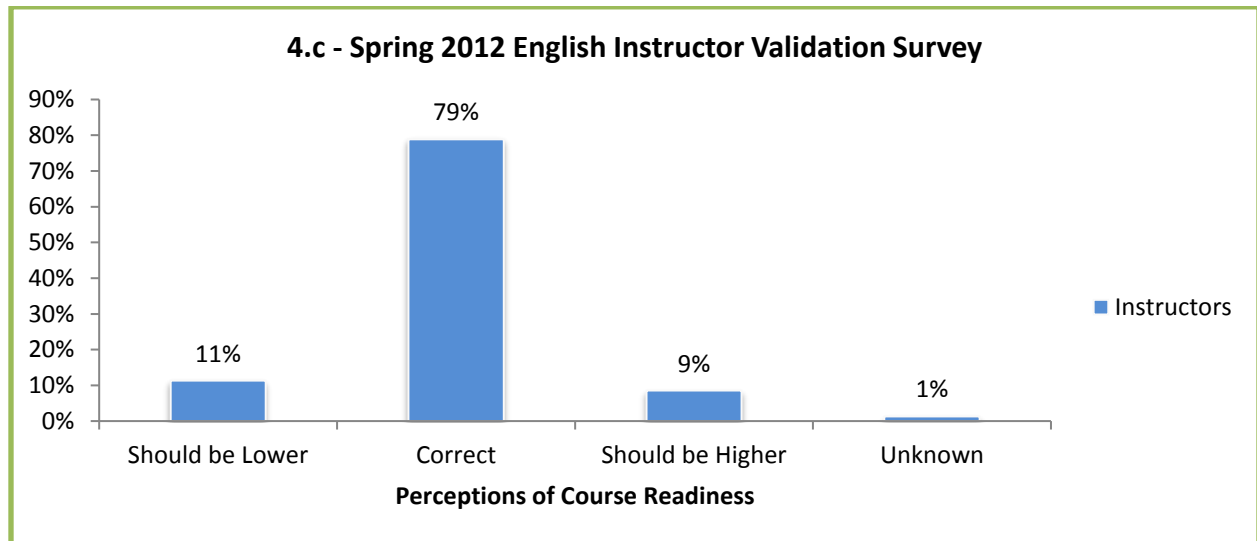
The CCC has established a Standard of at least 75% judgment of proper placement by instructors.

Results

Tables 4 - a, b, & c shows the English faculty members judgment for the students in their classes. The English faculty rated 79% of their students as belonging in the course.

Instructor Perception of English Students				
Course	Should be Lower	Correct	Should be Higher	Unknown
ENGL-061	8%	84%	6%	3%
ENGL-062	15%	73%	11%	1%
ENGL-095	15%	74%	10%	0%
ENGL-098	6%	83%	10%	1%
ENGL-101	11%	80%	8%	1%
ENGL-103	20%	74%	4%	2%
ENGL-104	22%	71%	3%	3%
ENGL-106	0%	100%	0%	0%
ENGL-130	0%	56%	44%	0%
Total	11%	79%	9%	1%

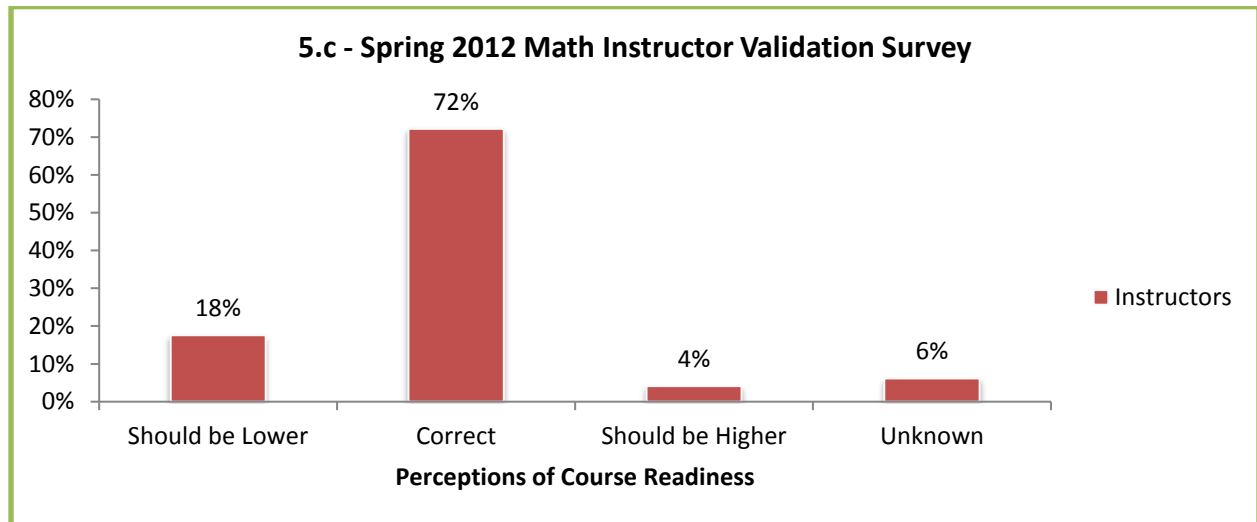
Instructor Perception of English Students				
Course	Should be Lower	Correct	Should be Higher	Unknown
ENGL-061	14	150	10	5
ENGL-062	45	214	31	3
ENGL-095	6	29	4	0
ENGL-098	29	382	44	5
ENGL-101	51	361	34	4
ENGL-103	38	139	8	4
ENGL-104	13	42	2	2
ENGL-106	0	30	0	0
ENGL-130	0	19	15	0
Total	196	1366	148	23



Tables 5 - a, b, c, & c1 shows the Math faculty members judgment for the students in their classes. The Math faculty rated 72% of their students as belonging in the course.

Instructor Perception of Math Students				
Course	Should be Lower	Correct	Should be Higher	Unknown
Math-050	13%	80%	7%	0%
Math-051	12%	70%	4%	14%
Math-090	20%	71%	6%	3%
Math-096	23%	69%	2%	6%
Math-105	12%	83%	3%	1%
Math-110	34%	39%	5%	21%
Math-115	0%	100%	0%	0%
Total	18%	72%	4%	6%

Instructor Perception of Math Students				
Course	Should be Lower	Correct	Should be Higher	Unknown
Math-050	21	132	11	0
Math-051	49	280	15	58
Math-090	96	334	28	12
Math-096	120	361	12	32
Math-105	25	175	7	3
Math-110	13	15	2	8
Math-115	0	30	0	0
Total	324	1327	75	113



The Unknown readiness level variable for Math was significantly at 6% which indicates Math faculty may need more time with students prior to making an assessment of their readiness level for the course

Reading Faculty did not return enough responses to merit an analysis of their perception on student readiness. In future studies, recommend a paper survey for Reading and ESL faculty to ensure a higher response rate.

Part B Conclusions

The results of Part B of the study suggest that for the Spring 20012 Validation survey, faculty judge between 72%* and 79% of students as correctly placed (* 77% if unknown level is removed). For English and Math disciplines served by AccuPlacer faculty judgments support the student's placement in these courses. The result of the faculty surveys provides evidence for the Accuplacer consequential-related validity and thus, provides support for maintaining this assessment tool.

Overall Conclusions

Class-Climate is a new survey tool at MSJC and was used for the first time for this survey. Class-Climate has a few minor issues which will need to be addressed for future validation surveys to ensure valid responses.

For English the overall finding was 72% of students feel they are correctly placed while 26% feel they should have placed higher. The majority of the students who feel they should have placed higher came from English-061 and English-062.

For Math the overall finding was 75% of students feel they are correctly placed while 20% feel they should have placed higher.

For Reading courses, 74% of students feel they are correctly placed while 24% feel they should have placed higher.

Performing a more detailed analysis of student's success rates would provide a slightly more objective measure of student's readiness level. Recommend looking at success rates of placed students compared to students who passed course prerequisites. If there is no discernible difference between success rates of placed students and matriculated students, it would be further indication of correctly placed students. If there is a success rate disparity between the two groups, a recommendation to adjust cut score placement levels could be determined.

REFERENCES

California Community Colleges. *Standards, Policies and Procedures for the Evaluation of the Assessment Instruments Used in California Community Colleges* (4th Edition, revised March 2001).

Data derived from Online Class-Climate Survey.