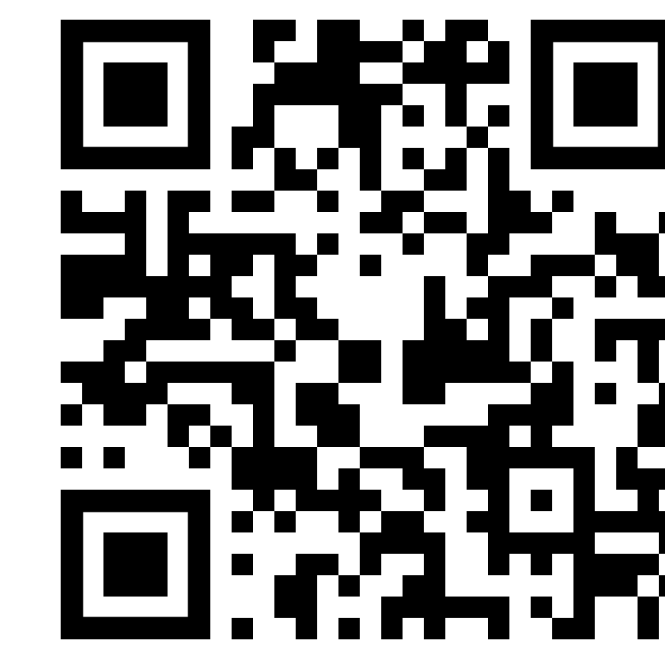


# Empowering First-Year Students in English: Assessing the Validity and Reliability of Directed Self-Placement

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## Research Questions

- Does the Directed Self Placement (DSP) survey provide accurate English course recommendations for first-year students?
- Do the results of the Direct Self Placement (DSP) and the different levels of education that students' parents have affect how well students perform, as shown by their grades, in their first-year writing course?

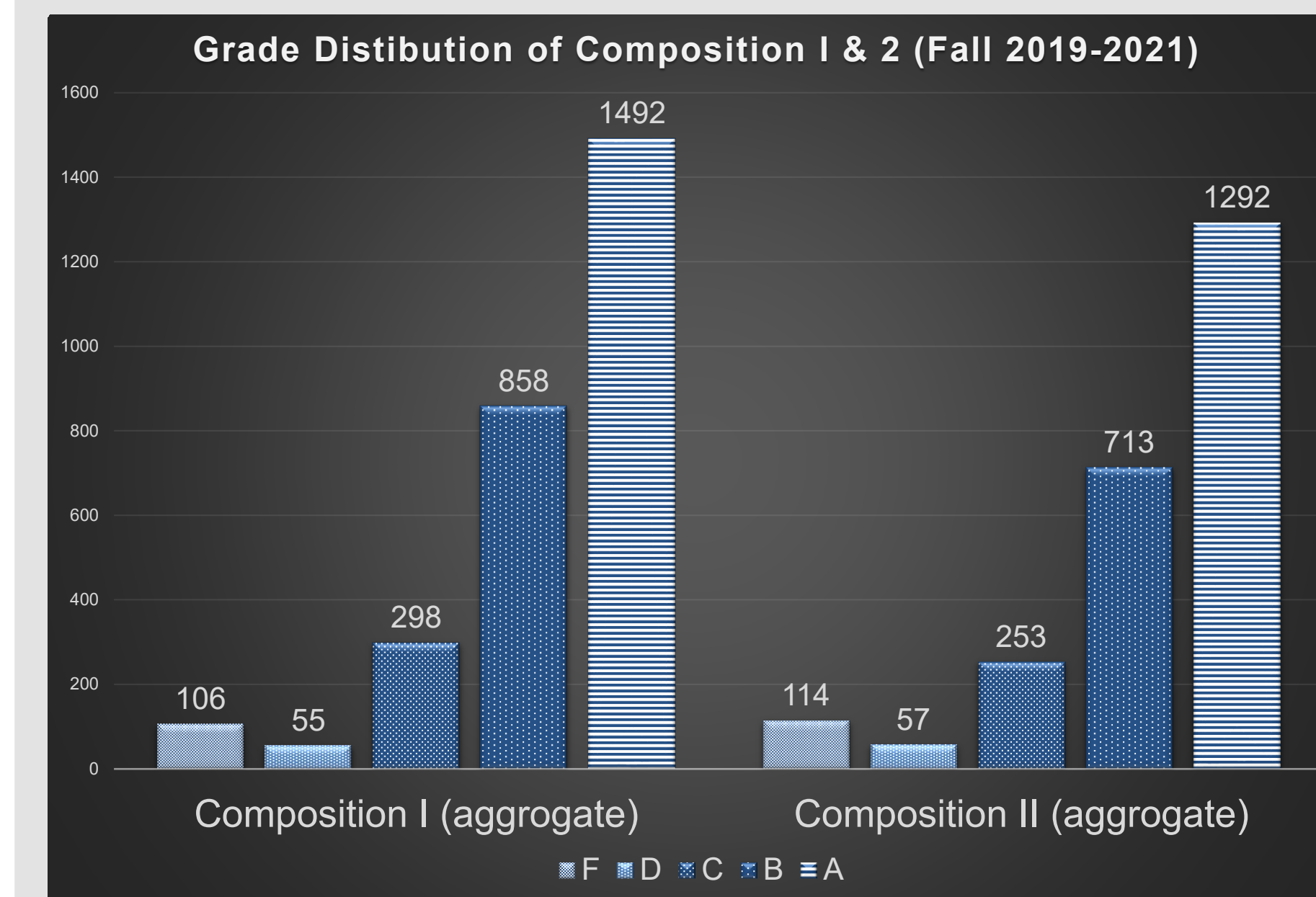
## Introduction

- The Directed Self Placement (DSP) survey evaluated the abilities and interests of first-year college-level English students before enrollment.
- The survey included questions about English courses, writing experience, reading habits, and self-assessed abilities.
- The primary objective was to empower students to take control of their placement based on their skills and knowledge.
- The study analyzed the final grade outcomes of the students' chosen English courses to assess the effectiveness of personalized course recommendations.

## Methods

- **Data Sources:**
  - Primary—Directed Self-Placement (DSP) online survey.
  - Secondary—Student Success Dashboard, a university database.
- **Participants:** 5,238 first-year college students at CSULB, all of whom completed the DSP survey before SOAR.
- **Materials:** The English department utilized the Qualtrics software to create the DSP, a web-based survey.
- **Procedure:** Prior to first-semester registration, students completed the DSP, and were provided with English course recommendations based on their DSP score.
- **Data Analysis:** Descriptive and inferential statistical analyses were conducted using SPSS software.

## Results



**Figure 1:** The grade distribution of Composition I and II courses, encompassing data spanning from the fall semester of 2019 to 2021. This study incorporates three years of aggregated data from the Directed Self-Placement (DSP) survey.

**Table 2**  
**Results of Mann - Whitney Non-Parametric Test for Composition I & II**

Variable	N	U	SE	p	Z	r
Composition I	2809	1013723	19441.66	0.123	1.541	0.03
Composition II	2429	796982	15659.61	<.001	3.911	0.08

The results of the Mann-Whitney U Test for Composition I found that there was no difference in *Composition I* course grades between those who followed the DSP recommendation to take a composition I course (Mdn= 4.00) and those who did not follow the DSP recommendation (Mdn= 4.00) [ $U = 1013723$ ,  $Z = 1.54$ ,  $p = .123$ ,  $r = 0.03$ ].

In contrast, the results of the Mann-Whitney U Test for *Composition II* found that there was a difference in *Composition II* course grades between those who followed the DSP recommendation to take a composition II course (Mdn= 4.00) and those who did not follow the DSP recommendation (Mdn= 3.00) [ $U = 796982$ ,  $Z = 3.911$ ,  $p < .001$ ,  $r = .0813$ ].

To better understand the difference between course grades and DSP recommendation for Composition II, an effect size was calculated. The correlation coefficient also known as  $r$  was computed by employing the rank-biserial correlation technique, and the resulting value was 0.0813. A small effect size indicates that while an effect was found the difference between composition II course grades for those who took the class despite the DSP recommendation were only about a little different from those who followed the DSP recommendation to take the class.

**Table 3**  
**Results of Mann - Whitney Non-Parametric Test Parental Education level**

Variable	N	U	SE	p	Z	r
Parents who have graduated college	783	82495	2761.534	0.032	2.142	0.08
Parents who have some college	630	53746.5	2063.17	0.043	2.019	0.08
Parents who have no college	813	85838	3078.341	0.145	1.459	0.05

The results of the Mann-Whitney U Test for students who have taken composition II and have parents that have graduated college found that there was a difference in *Composition II* course grades between those who followed the DSP recommendation to take a composition II course (Mdn= 4.00) and those who did not follow the DSP recommendation (Mdn= 3.00) [ $U = 82495$ ,  $Z = 2.142$ ,  $p < 0.032$ ,  $r = 0.08$ ].

Similarly, the results of the Mann-Whitney U Test for students who have taken composition II and have parents that have some college found that there was a difference in *Composition II* course grades between those who followed the DSP recommendation to take a composition II course (Mdn= 4.00) and those who did not follow the DSP recommendation (Mdn= 3.00) [ $U = 53746.5$ ,  $Z = 2.019$ ,  $p < 0.043$ ,  $r = 0.08$ ].

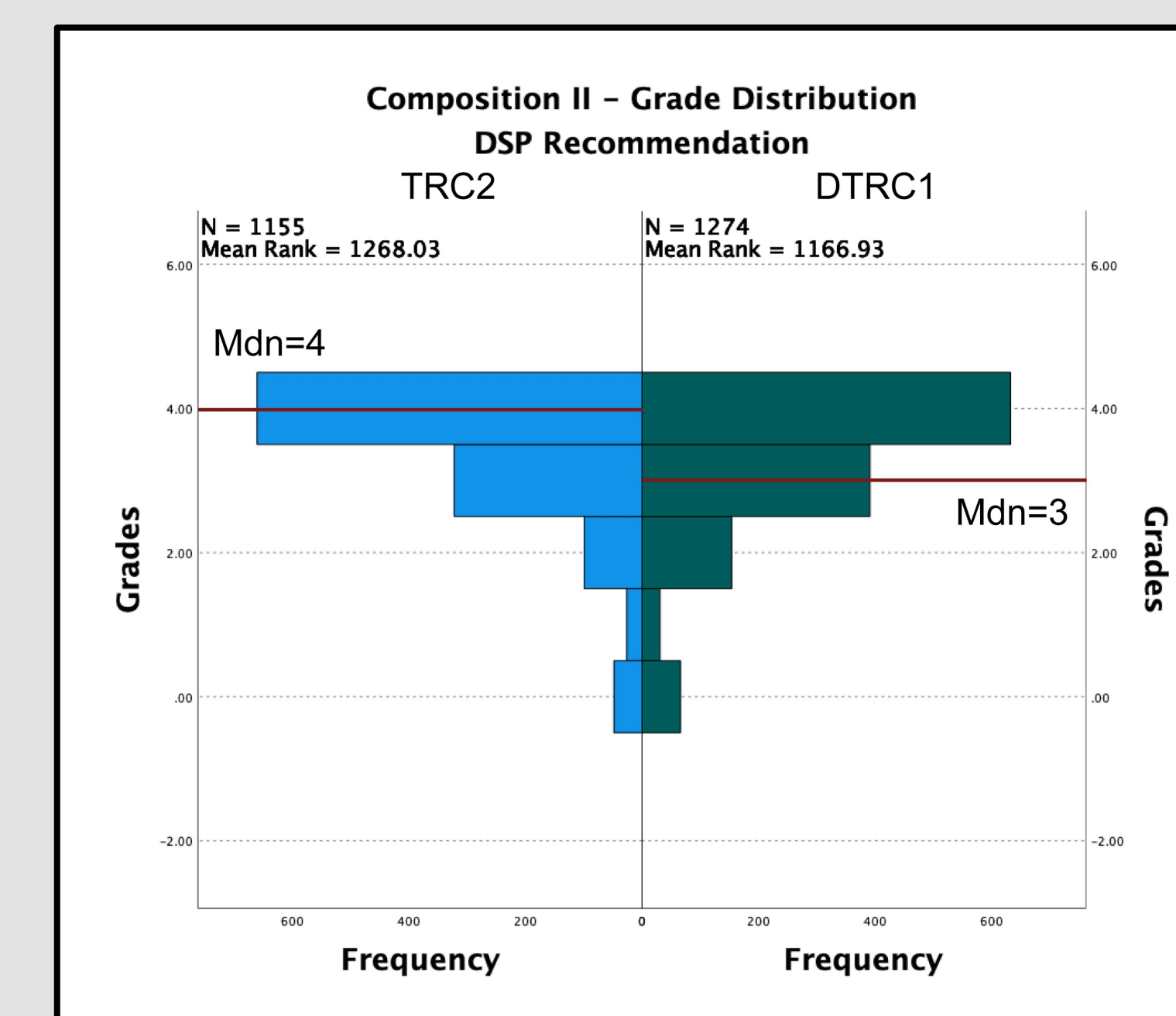
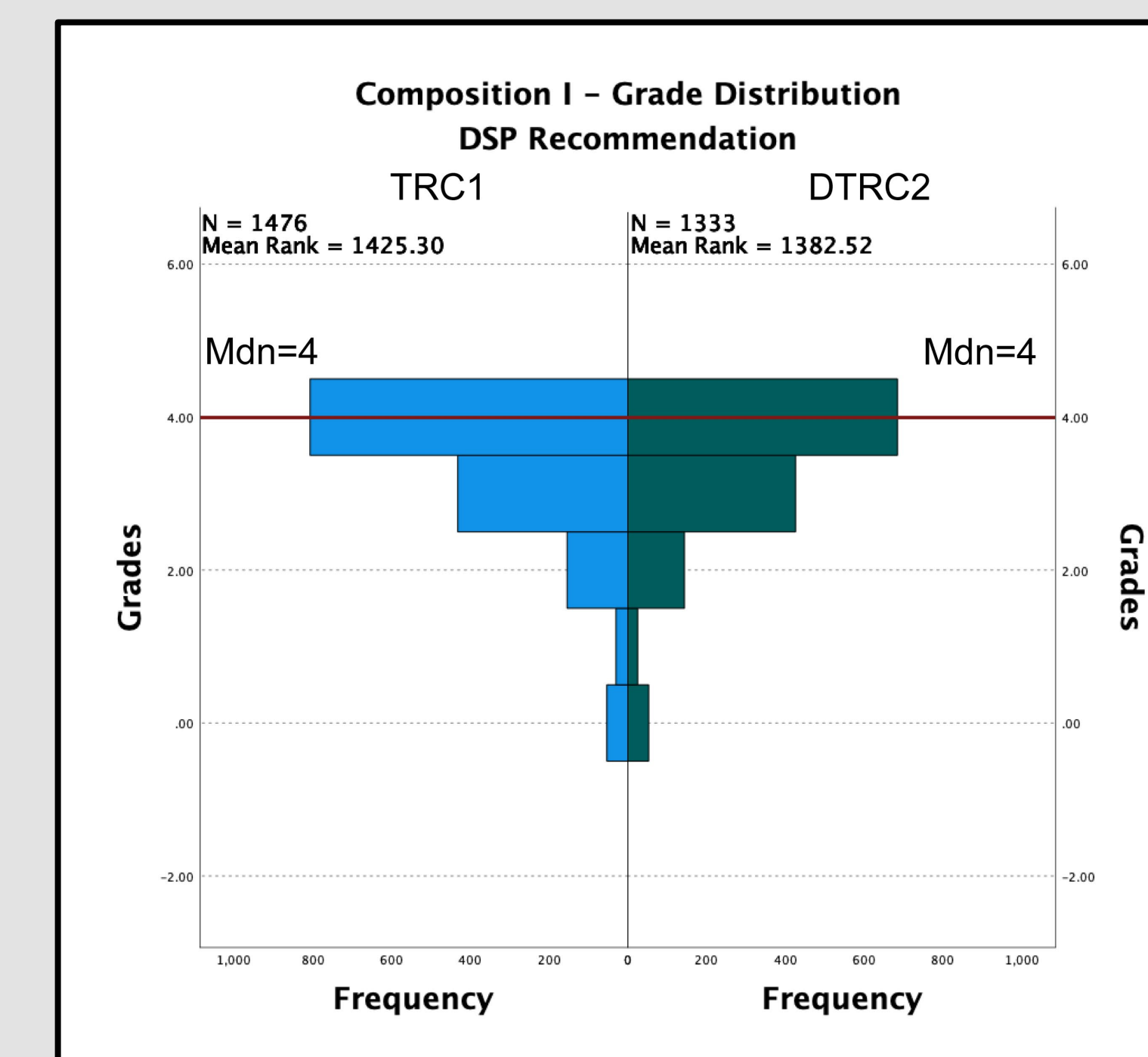
In contrast, the results of the Mann-Whitney U Test for students who have taken composition II and have parents that have no college education found that there was no difference in *Composition II* course grades between those who followed the DSP recommendation to take a composition II course (Mdn= 3.00) and those who did not follow the DSP recommendation (Mdn= 3.00) [ $U = 85838$ ,  $Z = 1.459$ ,  $p = 0.145$ ,  $r = 0.05$ ].

**Table 1**  
**Descriptive Statistics for Assessing Assumptions**

Variable	DSP Index	N	Range			M	SD	Skew
			min	max	Mdn			
Composition I	TRC1	1333	0	4	4	3.249	0.99673	-1.594*
	DTRC2	1476	0	4	4	3.294	0.98476	-1.647*
Composition II	TRC2	1155	0	4	4	3.316	1.01105	-1.762*
	DTRC1	1274	0	4	3	3.171	1.07339	-1.470*

TRC1 (Took Recommendation for Composition 1), DTRC2 (Didn't Take Recommendation for Composition 2), TRC2 (Took Recommendation for Composition 2), and DTRC1 (Didn't Take Recommendation for Composition 1). Composition I & II is an aggregate of student enrollment over a three-year period (2019 – 2021).

After the data was aggregated into 4 variables and cleaned, a preliminary screening using SPSS descriptive function was performed. All four variables were shown to have a significant positive skew indicating that first year student grades in composition I/II regardless of recommendation were mostly above a C average with a small subset (outliers) receiving D's or F's. Data transformation and the removal of outliers is recommended for performing parametric tests, however since it was felt that any transformation/removal of data would impact the integrity of the results, a Mann-Whitney U Test nonparametric test would be conducted.



**Figure 2:** The rank distribution for Composition I subgroups (TRC1 and DTRC2) and Composition II subgroups (TRC2 and DTRC1) provides insight into the relative performance of students in each subgroup within the respective composition courses. By examining the distribution of ranks assigned to the scores of students in these subgroups, researchers can assess whether there are significant differences in performance between students who followed the DSP recommendations and those who did not.

## Conclusion / Discussion

- No substantial performance disparities are present among Composition I subgroups, suggesting that the DSP recommendations might be effective, or additional factors could be counteracting potential inconsistencies.
- Significant differences did emerge among Composition II subgroups, which calls for additional exploration into the factors that contribute to these discrepancies.
- To further explore differences that emerged in Composition II Students were segmented based on their parents' educational backgrounds.
- Significant differences in performance for Composition II were found for students whose parents graduated from college or have some college experience.
- These findings highlights the potential impact of parental education on students' academic success in Composition II and align with existing educational research that suggests parental education can significantly impact students' learning outcomes and success.
- The data suggests that a more nuanced understanding of the factors contributing to the observed differences in performance among Composition II subgroups is needed.

## Implications for Action

- **Refine DSP process:** Utilize findings to revise survey questions, provide clearer instructions, and offer resources to help first-year students make accurate self-assessments.
- **Enhance course design:** Understand subgroup performance differences in Composition I and II courses and modify content, pedagogy, or support structures accordingly.
- **Foster collaborations:** Encourage partnerships among faculty, support staff, and administrators to develop targeted interventions or support systems for specific student subgroups.
- **Inform future research:** Use project findings as a basis for further exploration into factors that contribute to students' performance in composition courses, including qualitative studies.

## Next Steps / Future Directions

- Longitudinal study following a Composition I or II cohort through a three-year period.
- Examine graduation rates / other measures of academic achievement.
- Identify factors that contribute to students' success or barriers they may face.
- Develop interventions and support systems for students.