



# Verbatim and Gist Extraction Among University Colleges

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## Introduction

Fuzzy Trace Theory (FTT) posits that individuals use two different cognitive processes in encoding, storing, and retrieving information. One process (verbatim) encodes the details of the information, applying cost/benefit analysis when used for a decision. The other process (gist) encodes relational information extracted from the information and uses more intuition when applied to decisions. Often, use of one process over another can lead to different decisions. Further, there exists individual differences in the skill and preference for using these processes. The current study examined whether differences in verbatim, and gist skill or preference would vary by university college (STEM, or Liberal and Applied Arts). FTT states differences in verbatim or gist affect performance on learning tasks. Given the preponderance of verbatim type requirements in the STEM fields versus other majors, it was hypothesized that STEM majors would have higher preference and performance in verbatim processing.

## Method

421 participants took an online survey through the Stephen F. Austin SONA system. The survey consisted of 7 surveys to measure verbatim and gist preference and skill along with risk perception and demographics.

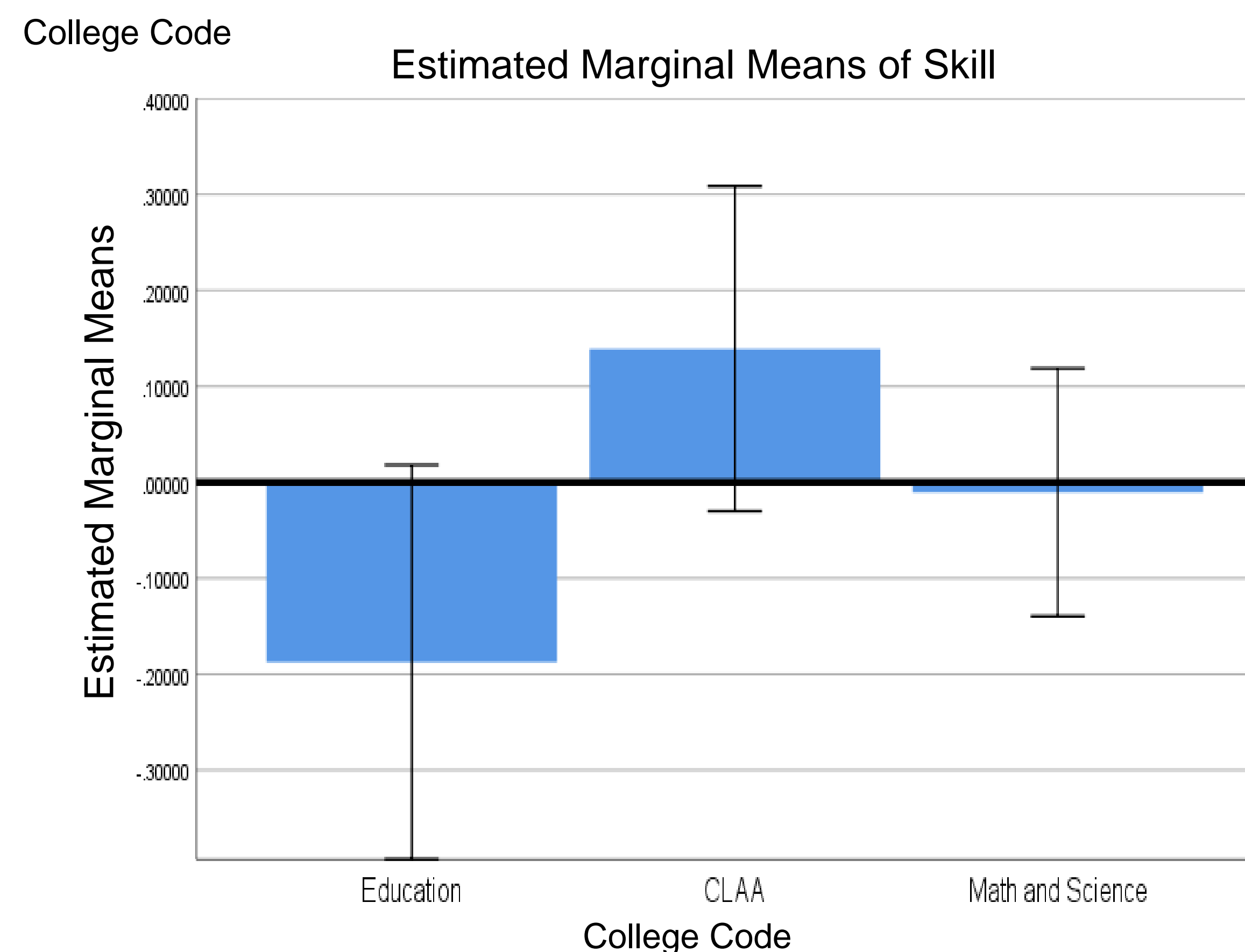
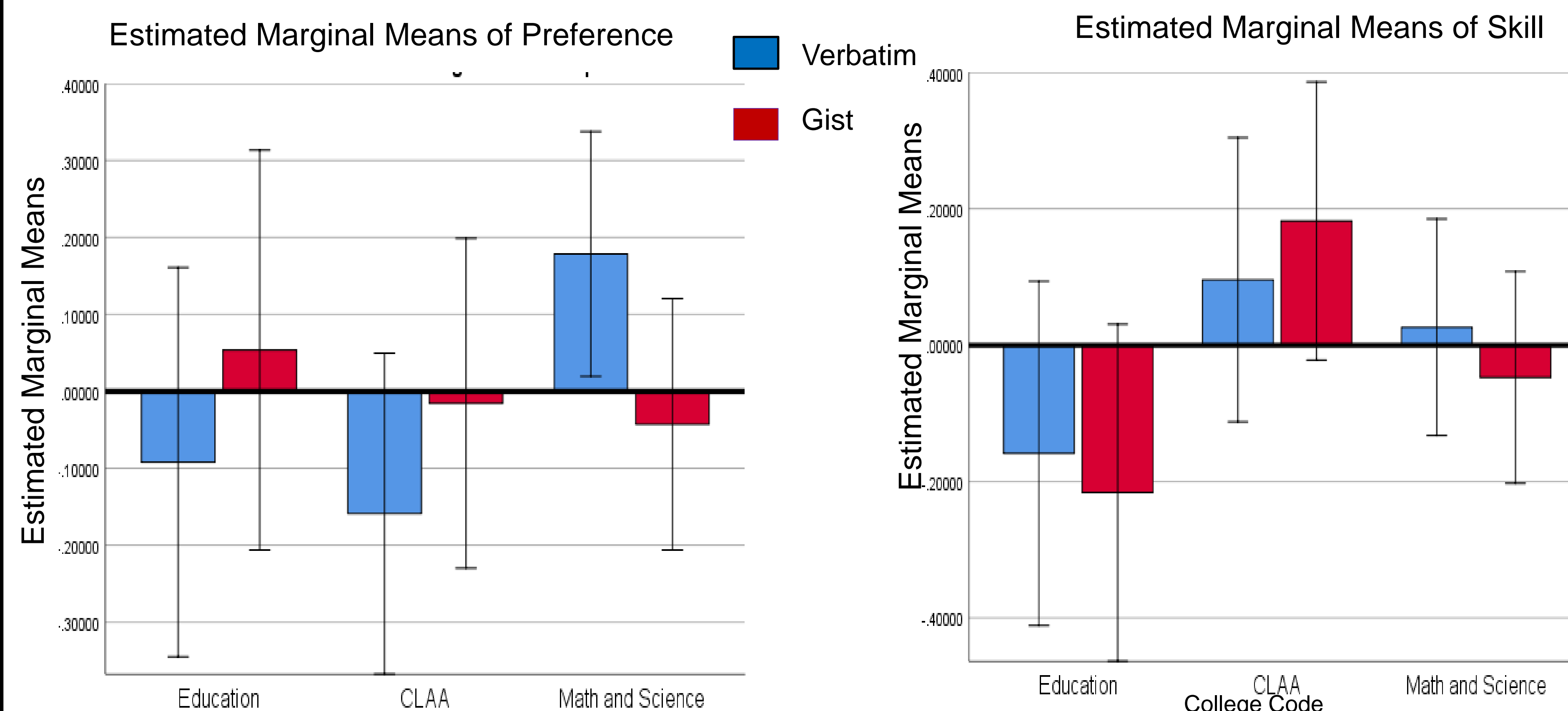
- Lipkus Numeracy Scale (Verbatim Skill)
- Subjective Numeracy Scale (Verbatim Preference)
- Reading Comprehension Test (Gist Skill)
- Nineteen Item Fuzzy Processing Preference (Gist Preference)
- Sensation Seeking Scale
- DOSPERT Scale
- Demographics Scale

After completing the survey, participants were categorized into their university colleges by major. Each scale was presented to the participants in randomized order. Scores from each scale were converted to a z-score and analyzed.

## Results

Results were analyzed using a mixed-model multivariate analysis of variance (MANOVA) with college code (2-Education, 4-Liberal and Applied Arts, and 5-Science and Mathematics) and FTT style (verbatim or gist) as the independent variables and skill and preference as the dependent measures. A marginal difference was found between college code and verbatim skill with  $F(2,4.082)=0.055$ ,  $0.055 > 0.05$ . The College of Liberal and Applied Arts showed a higher score for verbatim skill with the College of Education having the lowest score. No difference was found between preference and college.

### Verbatim and Gist Preference and Skill



## Discussion

Although not significant, results had a pattern that the CLAA has higher scores for both verbatim and gist than the College of Math and Science, followed by the College of Education. Although these results are not what was expected, they do provide explorative information. These results could be due to having most of the sample as university freshman. These students may not have grown in their perspective fields and have not acquired a verbatim or gist preference nor have differences in skill yet been able to emerge. Future research should sample university juniors or seniors so that preference and skill for verbatim and gist may be seen to emerge in courses requiring more rigor.

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