

### 3.0 Results and Analysis

Results were collected from a total of 71 participants: 34 of intermediate L2 proficiency and 37 of advanced proficiency. For each participant group, the data were coded according to the following criteria, designed to address the hypotheses of the study:

- 1) Demographic information and language background
- 2) Number of times each idiom was judged transparent or opaque
- 3) Average rating of translation acceptability for each idiom

### 3.1 Language Background of Participants

This study assumes that language background influences metalinguistic awareness, which in turn affects the kinds of intuitions important to the present study. It was therefore essential that the two participant groups be similar enough to allow a valid comparison of their judgments.

Table 1. *Language background of intermediate and advanced proficiency participants*

|   | Intermediate Level<br>[n=34]                 | Advanced Level<br>[n=37]            |
|---|--|-------------------------------------|
| Average Age   | 19.0 years                                   | 19.3 years                          |
| Sex   | 26 female<br>8 male                          | 30 female<br>7 male                 |
| Childhood Place of Residence                          | California (26)<br>Other states (8)          | California (28)<br>Other states (9) |
| Average Age of First Contact With Spanish             | 12.1 years                                   | 12.3 years                          |
| L2 Learning Environment <sup>1</sup>                  | School (33)<br>Home (1)<br>Friends (3)       | School (37)<br>Home (2)             |
| Length of Residence in a Spanish-Speaking Country     | None (24)<br>Two weeks-<br>three months (10) | None (23)<br>One-three months (14)  |
| Spanish-English Similarity Rating (1-10) <sup>2</sup> | 6.19   | 5.84                                |

Both intermediate and advanced level learners were highly similar in the linguistic background factors significant for this study, as the table above illustrates.

<sup>1</sup> Some respondents gave multiple answers to this question, resulting in a sum greater than the number of participants.

<sup>2</sup> The “Spanish-English Similarity Rating” was a cursory attempt to assess one of Kellerman’s (1977) hypotheses that psychotypology influences intuitions about transfer. This question will be discussed further in Section 4.1 of the following chapter.

### 3.2 Semantic Transparency and Opacity

The first hypothesis of the present study predicted that participants would be able to sort English language idioms according to semantic transparency and opacity, and that this sorting would correspond to the ways that I, the researcher, had classified the idioms. I organized the idioms into three groups: metaphorical images, similes and opaque idioms. As discussed in Chapter 1, I classified metaphorical images and similes as semantically transparent, and opaque idioms as semantically opaque. The complete list of these idioms is presented below.

Table 2. *Idioms listed by semantic category*

| Semantically Transparent           | Semantically Opaque          |
|------------------------------------|------------------------------|
| back to square one                 | my cup of tea                |
| a shot in the dark                 | a piece of cake              |
| a pain in the neck                 | tie the knot                 |
| to think outside the box           | bite the bullet              |
| on pins and needles                | put two and two together     |
| one track mind                     | take it with a grain of salt |
| sugarcoat the truth                | under the weather            |
| twenty-four seven                  | with flying colors           |
| walk on eggshells                  | to feel blue                 |
| between a rock and a hard place    | kick the bucket              |
| pay through the nose               | in a pickle                  |
| put your money where your mouth is | out of the blue              |
| scratch the surface                | pull my leg                  |
| see eye to eye                     | push the envelope            |
| pull the plug                      | quit cold turkey             |
| clean as a whistle                 |                              |
| dry as a bone                      |                              |
| built like a tank                  |                              |
| tough as nails                     |                              |
| dead as a doornail                 |                              |
| out like a light                   |                              |
| sell like hotcakes                 |                              |
| stick out like a sore thumb        |                              |
| American as apple pie              |                              |
| like the back of my hand           |                              |
| hit like a ton of bricks           |                              |
| like two peas in a pod             |                              |
| like a deer in the headlights      |                              |
| work like a charm                  |                              |
| feel like a million bucks          |                              |

Results indicate that both intermediate and advanced level participants classified the idioms

in ways that corresponded to these categories. The following table shows the percentages of intermediate proficiency participants who judged each idiom to be either semantically transparent or opaque.

Table 3. *Categorization of idioms as transparent/opaque by intermediate proficiency participants*

| Idiom                              | Semantic Category <sup>3</sup> | Transparent | Opaque | N/A <sup>4</sup> |
|------------------------------------|--------------------------------|-------------|--------|------------------|
| built like a tank                  | transparent                    | 97.1%       | 2.9%   |                  |
| hit like a ton of bricks           | transparent                    | 94.1%       | 5.9%   |                  |
| tough as nails                     | transparent                    | 91.2%       | 8.8%   |                  |
| see eye to eye                     | transparent                    | 91.2%       | 8.8%   |                  |
| dry as a bone                      | transparent                    | 88.2%       | 11.8%  |                  |
| walk on eggshells                  | transparent                    | 88.2%       | 11.8%  |                  |
| like a deer in the headlights      | transparent                    | 85.3%       | 14.7%  |                  |
| a pain in the neck                 | transparent                    | 85.3%       | 14.7%  |                  |
| pull the plug                      | transparent                    | 79.4%       | 20.6%  |                  |
| sugarcoat the truth                | transparent                    | 79.4%       | 20.6%  |                  |
| like two peas in a pod             | transparent                    | 79.4%       | 18.2%  | 2.4%             |
| scratch the surface                | transparent                    | 76.5%       | 23.5%  |                  |
| a shot in the dark                 | transparent                    | 73.5%       | 24.2%  | 2.3%             |
| twenty-four seven                  | transparent                    | 70.6%       | 29.4%  |                  |
| out like a light                   | transparent                    | 70.6%       | 29.4%  |                  |
| on pins and needles                | transparent                    | 70.6%       | 29.4%  |                  |
| one track mind                     | transparent                    | 70.6%       | 29.4%  |                  |
| between a rock and a hard place    | transparent                    | 67.6%       | 30.3%  | 2.1%             |
| work like a charm                  | transparent                    | 67.6%       | 32.4%  |                  |
| stick out like a sore thumb        | transparent                    | 64.7%       | 35.3%  |                  |
| to think outside the box           | transparent                    | 64.7%       | 33.3%  | 2.0%             |
| like the back of my hand           | transparent                    | 61.8%       | 38.2%  |                  |
| put your money where your mouth is | transparent                    | 58.8%       | 41.2%  |                  |
| American as apple pie              | transparent                    | 58.8%       | 41.2%  |                  |
| put two and two together           | opaque                         | 55.9%       | 44.1%  |                  |
| feel like a million bucks          | transparent                    | 55.9%       | 44.1%  |                  |
| sell like hotcakes                 | transparent                    | 52.9%       | 47.1%  |                  |
| back to square one                 | transparent                    | 47.1%       | 52.9%  |                  |
| dead as a doornail                 | transparent                    | 44.1%       | 55.9%  |                  |
| clean as a whistle                 | transparent                    | 44.1%       | 55.9%  |                  |
| bite the bullet                    | opaque                         | 20.6%       | 79.4%  |                  |
| push the envelope                  | opaque                         | 20.6%       | 79.4%  |                  |
| under the weather                  | opaque                         | 17.6%       | 82.4%  |                  |
| out of the blue                    | opaque                         | 17.6%       | 82.4%  |                  |
| tie the knot                       | opaque                         | 14.7%       | 85.3%  |                  |
| my cup of tea                      | opaque                         | 8.8%        | 91.2%  |                  |
| kick the bucket                    | opaque                         | 8.8%        | 91.2%  |                  |
| to feel blue                       | opaque                         | 8.8%        | 91.2%  |                  |

<sup>3</sup> This category was determined by the researcher, as described in Section 1.6.

<sup>4</sup> Unintelligible or omitted answers were coded “N/A”.

|                              |             |      |        |
|------------------------------|-------------|------|--------|
| pull my leg                  | opaque      | 8.8% | 91.2%  |
| with flying colors           | opaque      | 8.8% | 91.2%  |
| take it with a grain of salt | opaque      | 5.9% | 94.1%  |
| pay through the nose         | transparent | 2.9% | 97.1%  |
| a piece of cake              | opaque      | 0.0% | 100.0% |
| quit cold turkey             | opaque      | 0.0% | 100.0% |
| in a pickle                  | opaque      | 0.0% | 100.0% |

This table shows that the majority of intermediate proficiency participants judged the data in ways that corresponded to my classifications, with two exceptional cases. A majority felt that *put two and two together* was semantically transparent, whereas I had categorized it as opaque, and a majority judged *pay through the nose* as opaque rather than transparent. The following table shows the same data for advanced level participants.

Table 4. *Categorization of idioms as transparent/opaque by advanced proficiency participants*

| Idiom                              | Semantic Category | Transparent | Opaque |
|------------------------------------|-------------------|-------------|--------|
| tough as nails                     | transparent       | 100.0%      | 0.0%   |
| built like a tank                  | transparent       | 91.9%       | 8.1%   |
| see eye to eye                     | transparent       | 91.9%       | 8.1%   |
| hit like a ton of bricks           | transparent       | 86.5%       | 13.5%  |
| dry as a bone                      | transparent       | 81.1%       | 18.9%  |
| a pain in the neck                 | transparent       | 81.1%       | 18.9%  |
| sugarcoat the truth                | transparent       | 81.1%       | 18.9%  |
| like two peas in a pod             | transparent       | 81.1%       | 18.9%  |
| between a rock and a hard place    | transparent       | 78.4%       | 21.6%  |
| scratch the surface                | transparent       | 78.4%       | 21.6%  |
| out like a light                   | transparent       | 78.4%       | 21.6%  |
| one track mind                     | transparent       | 78.4%       | 21.6%  |
| walk on eggshells                  | transparent       | 75.7%       | 24.3%  |
| to think outside the box           | transparent       | 75.7%       | 24.3%  |
| like a deer in the headlights      | transparent       | 73.0%       | 27.0%  |
| a shot in the dark                 | transparent       | 73.0%       | 27.0%  |
| work like a charm                  | transparent       | 73.0%       | 27.0%  |
| put two and two together           | opaque            | 67.6%       | 32.4%  |
| on pins and needles                | transparent       | 67.6%       | 32.4%  |
| stick out like a sore thumb        | transparent       | 64.9%       | 35.1%  |
| dead as a doornail                 | transparent       | 64.9%       | 35.1%  |
| twenty-four seven                  | transparent       | 64.9%       | 35.1%  |
| feel like a million bucks          | transparent       | 62.2%       | 37.8%  |
| pull the plug                      | transparent       | 59.5%       | 40.5%  |
| back to square one                 | transparent       | 56.8%       | 43.2%  |
| American as apple pie              | transparent       | 48.6%       | 51.4%  |
| put your money where your mouth is | transparent       | 45.9%       | 54.1%  |
| like the back of my hand           | transparent       | 45.9%       | 54.1%  |

|                              |             |       |       |
|------------------------------|-------------|-------|-------|
| sell like hotcakes           | transparent | 43.2% | 56.8% |
| clean as a whistle           | transparent | 40.5% | 59.5% |
| tie the knot                 | opaque      | 21.6% | 78.4% |
| to feel blue                 | opaque      | 18.9% | 81.1% |
| under the weather            | opaque      | 18.9% | 81.1% |
| bite the bullet              | opaque      | 16.2% | 83.8% |
| take it with a grain of salt | opaque      | 16.2% | 83.8% |
| out of the blue              | opaque      | 16.2% | 83.8% |
| my cup of tea                | opaque      | 10.8% | 89.2% |
| with flying colors           | opaque      | 10.8% | 89.2% |
| pay through the nose         | transparent | 10.8% | 89.2% |
| pull my leg                  | opaque      | 8.1%  | 91.9% |
| push the envelope            | opaque      | 8.1%  | 91.9% |
| kick the bucket              | opaque      | 5.4%  | 94.6% |
| a piece of cake              | opaque      | 2.7%  | 97.3% |
| quit cold turkey             | opaque      | 2.7%  | 97.3% |
| in a pickle                  | opaque      | 2.7%  | 97.3% |

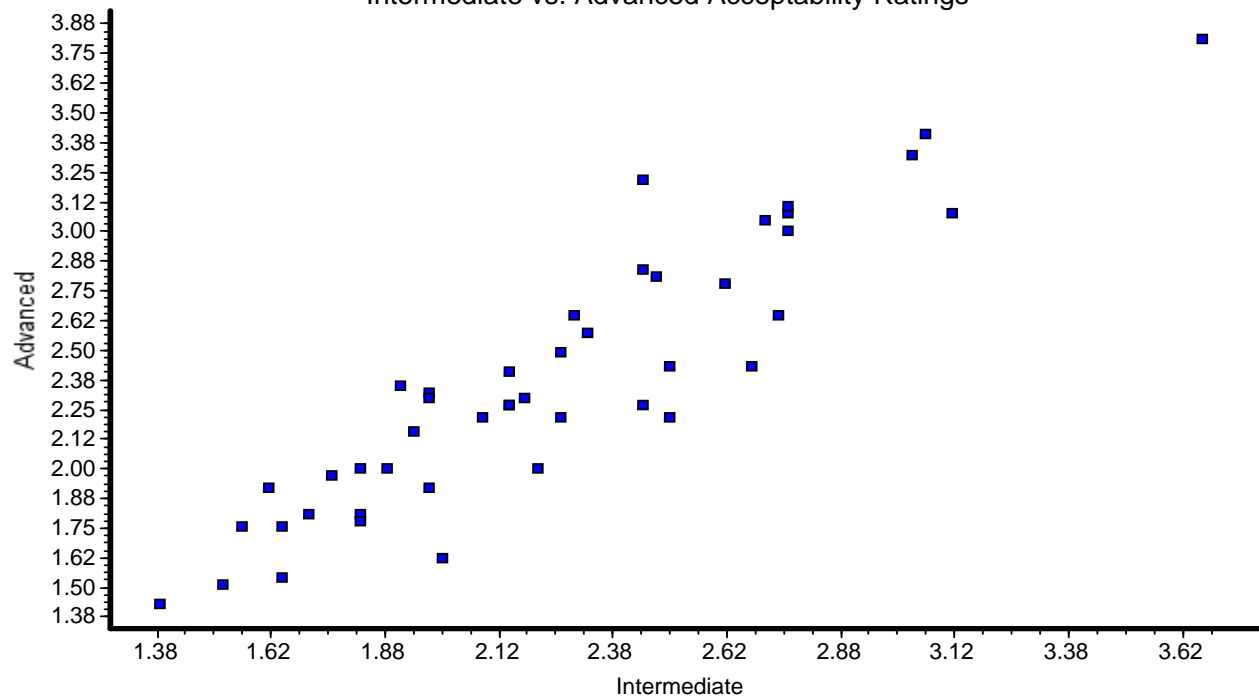
The majority of advanced level participants also sorted the idioms in ways which corresponded to my classification, and coincided with the intermediate level on the exceptional cases. A majority of advanced proficiency participants deemed *put two and two together* to be semantically transparent instead of opaque, and a majority judged *pay through the nose* as opaque rather than transparent. Results demonstrate a correspondence between my classifications of semantic transparency/opacity and the judgments of the participants in this study and suggest the validity of these categories for the population in this experiment. Results also indicate a high degree of correlation between the judgments of each proficiency level. A Pearson correlation test revealed a correlation coefficient  $r$  of 0.96 ( $p < 0.0001$ ), representing a 93% overlap in the ways that the two groups classified idioms.

### *3.3 Acceptability of Idioms in Word-for-Word Translation*

The second hypothesis proposed that idioms identified as more semantically transparent would be rated more acceptable in direct translation than idioms identified as semantically opaque. Calculating the correlation of these two values first requires a review of acceptability ratings to later correlate with the aforementioned judgments of semantic transparency. I will

begin by stating that, in general, intermediate and advanced proficiency groups rated idioms in highly similar ways, as shown by the correlation coefficient  $r = 0.92$  ( $p < 0.0001$ ), indicating an 84% overlap in acceptability ratings of the two groups. The following scatterplot illustrates the correlation.

Figure 1. *Intermediate vs. advanced acceptability ratings*  
Intermediate vs. Advanced Acceptability Ratings



These results account for all idioms, but a more detailed analysis examined ratings for the subgroups of idioms that I had classified as transparent and opaque. Both groups rated transparent idioms as more acceptable in translation on average than opaque idioms (See Table 5), an outcome which supports the second hypothesis of this study<sup>5</sup>.

<sup>5</sup> This is true in the general sense. That is, idioms in the transparent category were rated as more acceptable in translation than idioms in the opaque category. However, when the acceptability rating of each idiom is compared its semantic transparency rating a different pattern emerges, as described in Section 3.4.

Table 5. *Intermediate and advanced acceptability ratings of transparent and opaque idioms*

|                           | Transparent Idioms | Opaque Idioms |
|---------------------------|--------------------|---------------|
| <b>Intermediate Level</b> |                    |               |
| Mean Rating ( <i>SD</i> ) | 2.41 (.47)         | 1.89 (.30)    |
| Lowest Rating             | 1.62               | 1.38          |
| Highest Rating            | 3.67               | 2.29          |
| <b>Advanced Level</b>     |                    |               |
| Mean Rating ( <i>SD</i> ) | 2.57 (.54)         | 1.99 (.38)    |
| Lowest Rating             | 1.62               | 1.43          |
| Highest Rating            | 3.81               | 2.65          |

Here too, intermediate and advanced proficiency participants rated the transparent and opaque idiom subgroups in similar ways. A paired *t*-test reveals very significant matching of mean acceptability ratings. For intermediate vs. advanced ratings of transparent idioms (Figure 2)  $t(29) = 3.27, p = 0.003$ . For intermediate vs. advanced ratings of opaque idioms (Figure 3)  $t(14) = 3.08, p = 0.008$ .

Figure 2. *Intermediate vs. advanced acceptability ratings of transparent idioms*

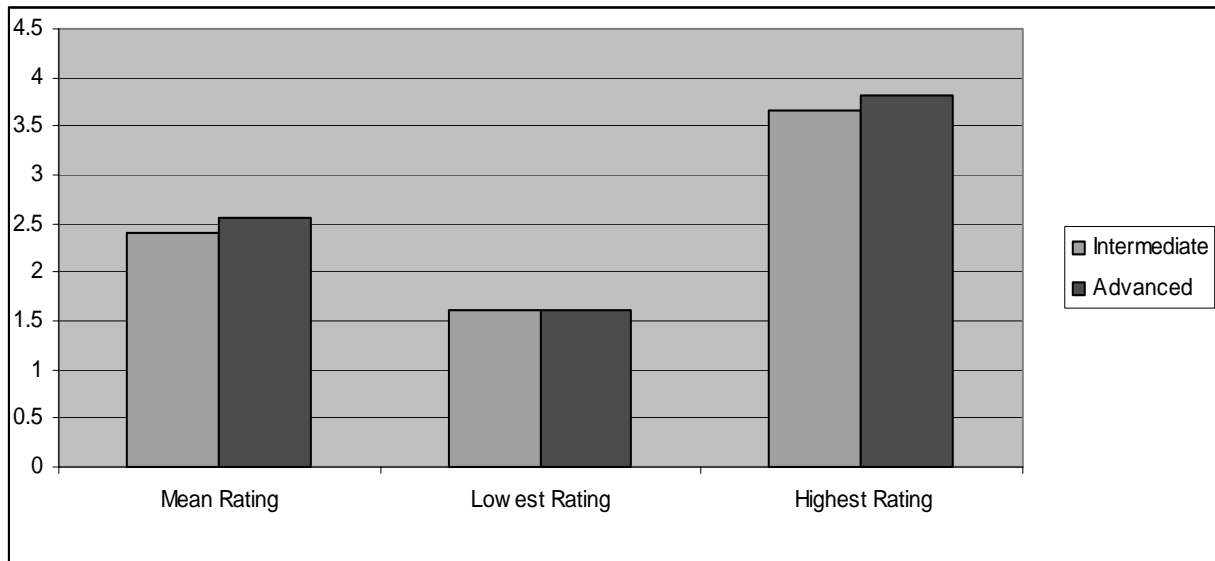
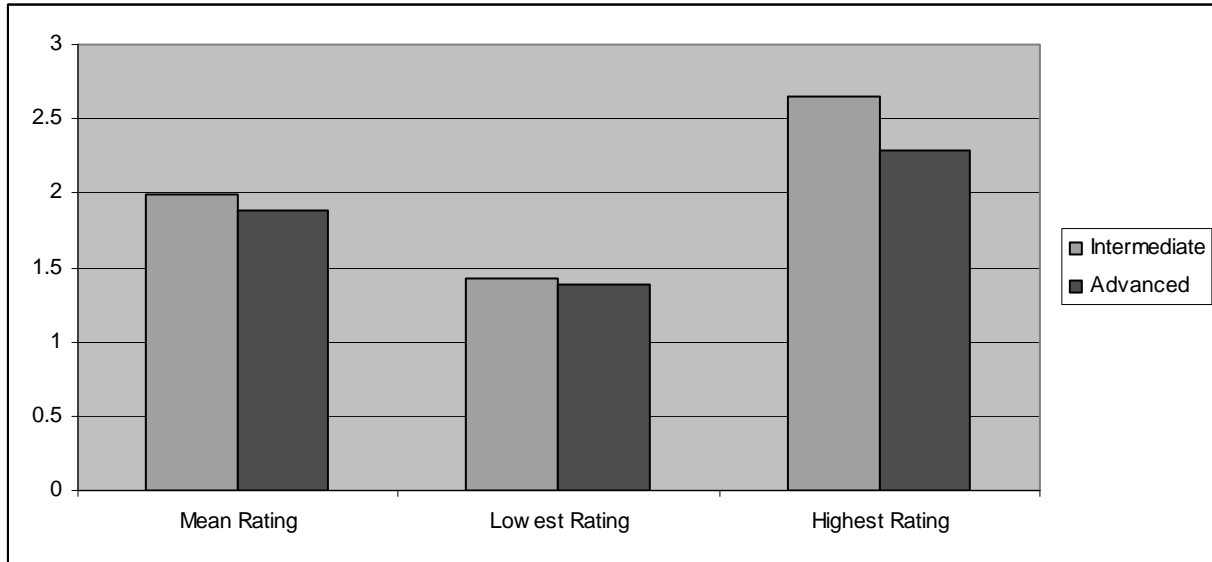


Figure 3. *Intermediate vs. advanced acceptability ratings of opaque idioms*



### 3.4 Semantic Transparency and Acceptability Judgments

Now we can return to the hypothesis that idioms identified as more semantically transparent will be rated more acceptable in direct translation than semantically opaque idioms. Given the results of the present study, this hypothesis is not strongly supported. For both the intermediate and advanced proficiency levels, there is only a moderate correlation between semantic transparency judgments and acceptability of word-for-word translation (see Table 6).

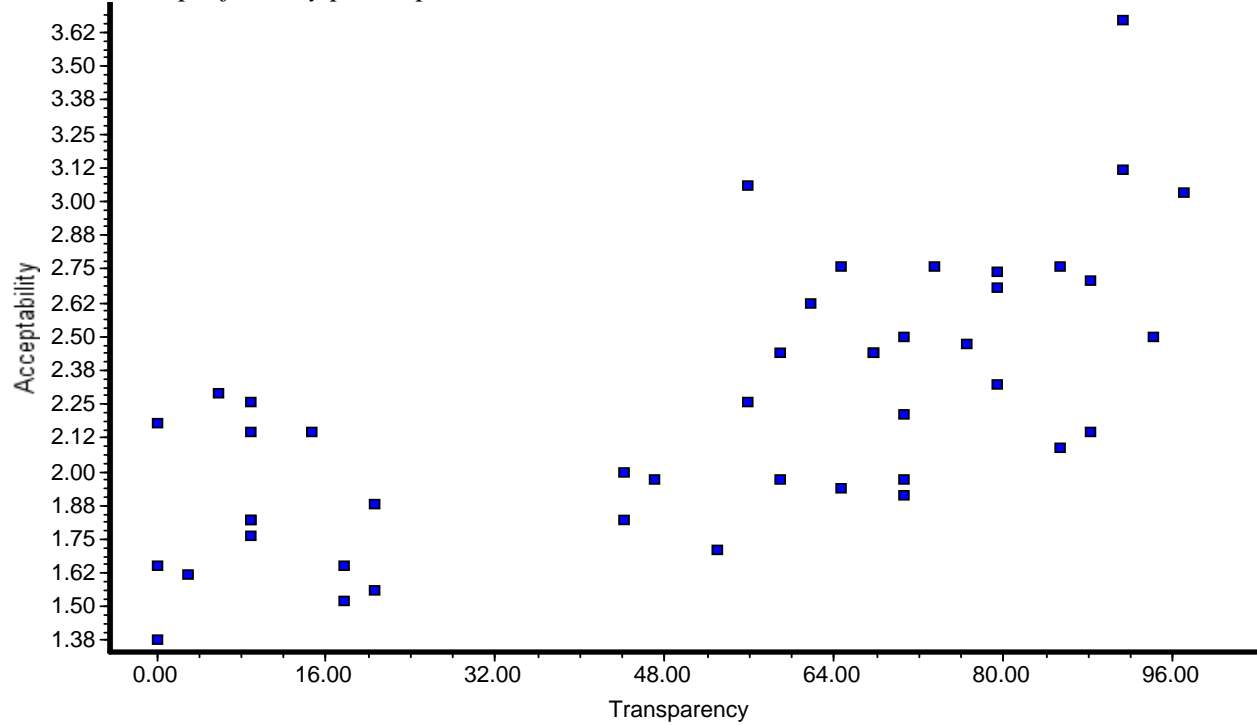
Table 6. *Correlation between semantic transparency and acceptability of direct translation*

|                                    | Intermediate Level | Advanced Level |
|------------------------------------|--------------------|----------------|
| Correlation Coefficient $r$        | 0.68               | 0.67           |
| Coefficient of determination $r^2$ | 0.46               | 0.45           |
| $p$ value                          | <0.0001            | <0.0001        |

I had predicted, for example, that an idiom judged highly transparent would also be rated highly acceptable in direct translation, but results show that the shared variance of these two variables is less than 50% for both the intermediate and advanced groups. The following scatterplots illustrate the degree of correlation: 46% for the intermediate group (Figure 4) and 45% for the advanced group (Figure 5).

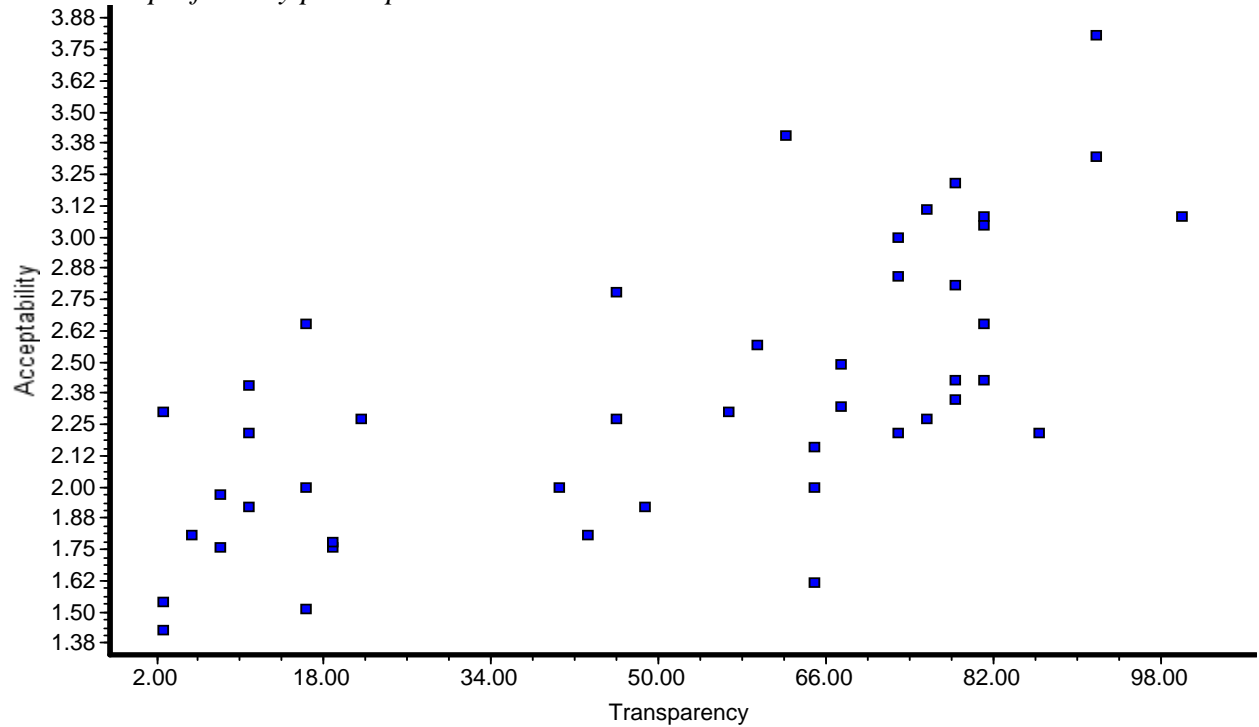


Figure 4. Correlation between semantic transparency and acceptability of direct translation for intermediate proficiency participants



Note. Acceptability values are mean ratings and transparency values are percentages (as in Table 3).

Figure 5. Correlation between semantic transparency and acceptability of direct translation for advanced proficiency participants



Note. Acceptability values are mean ratings and transparency values are percentages (as in Table 4).

### 3.5 Intermediate vs. Advanced Proficiency Judgments of Acceptability

The final hypothesis of this study predicted that intermediate learners of Spanish would be more willing to accept the direct translation of idioms than advanced learners of Spanish. Results do not support this hypothesis. A paired  $t$ -test reveals extremely significant matching of mean acceptability ratings  $t(44) = 4.13$  ( $p = 0.0002$ ). That is, the difference of the means is negligible and it is highly unlikely that this outcome occurred by chance. The summary of data for this test is presented below.

Table 7. *Intermediate vs. advanced acceptability ratings*

|                    | Intermediate | Advanced |
|--------------------|--------------|----------|
| Mean Rating        | 2.24         | 2.38     |
| Standard Deviation | .49          | .56      |
| Lowest Rating      | 1.38         | 1.43     |
| Highest Rating     | 3.67         | 3.81     |

Results indicate that intermediate and advanced proficiency participants rate the data in essentially similar ways. These results corroborate the correlation data presented in Section 3.3 above.