*Figure 2.* CEO (left) of a software firm co-presents with intern and supervisor.

These interns came back to their regular classroom environment with lots of questions and new challenges for their teachers. I find that interns who successfully complete overseas programs generally return to my classroom with a better understanding of the career path they want to follow. And this enlightenment leads them to set new goals for improving their language and communication skills.

[JALT PRAXIS] WRITERS' WORKSHOP
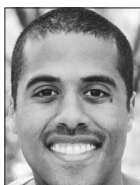
Vikki Williams and Charles Moore

Writers' Workshop is written on a collaborative basis with the members of the Peer Support Group (PSG). In each column, topics are shared that provide advice and support for novice writers, experienced writers, or nearly anyone who is looking to write for academic purposes. If you would like to inquire about submitting a paper for review, or are interested in joining the PSG team, please contact us using the following information.

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Presenting Statistics in Tables

David Ockert

Toyo University

This article was written to explain how to present statistical results in table format in a paper for submission to a peer-reviewed journal. The tables included were produced by the author and appeared in previously published papers. They are properly cited in the text and appear in the references as they would in an actual manuscript for submission to a peer-reviewed journal. Therefore, the styles of the three tables are different for each journal, and the reader should keep this in mind when reading and scrutinizing them.

For example, Table 1, which appeared in *The Journal of Second Language Teaching & Research* (Ockert, 2015a), represents a common format. The table number is followed by a period, then the table heading in italics. Notice, however, that only the first word is capitalized. Also, there are only three horizontal lines and no vertical lines, to minimize the amount of ink used (Hudson, 2015). Please note that FLAs stands for foreign language activities, and WTC is the acronym for willingness to communicate.

All research studies should include the descriptive statistics. The mean score (the average of all scores) is represented by a capital *M* in italics, and is followed by the standard deviation, represented by capital *SD*, in italics. Correlations are reported to three decimal places, and notice that there is no '0' before the full stop. Why? Because correlations cannot be '1.0' or more. If they were, the items would be identical. Below the table the word *Note* is italicized, and the *P* (probability) value is indicated with an asterisk. There is also a space before and after the '<' sign.

On the other hand, Table 2, from *Selected Papers from the 2016 PAC Conference* (Ockert, 2016), follows a different format, and presents the pre- and post-data of an experiment involving Skype exchanges. The table number appears above the heading and is in all caps, and both are centered and in bold font. Also, the content words in the table heading are capitalized. Notice, however, that Table 2 has two sub-headers (Before Skype & After Skype), which are both underlined. This is because each appears within the standard three horizontal line format, and each covers two data columns. Finally, as Table 2 compares the results of an educational intervention, it should show whether or not the statistical significant differences between the two groups' means are meaningful (Brown, 2012). To do this, the effect size is reported, as well as the statistical power (Soper, 2016b).

As can be seen, statistically significant differences exist between four of the six items. Therefore, further analysis is performed to compare the statistically significant differences between the mean scores for the students before and after the intervention, by calculating the effect sizes using Cohen's *d* (Cohen, 1992a; Soper, 2016a). Notice the '0' before the full stop for the effect size data. This is because an effect size can be greater than 1.0, which indicates that the mean of one group is 1.0 standard deviations higher than that of the other group.

For reference, the effect size analysis compares the statistically significant differences between the mean scores for the positive self-review (PSR) and the non-PSR students after the intervention. Cohen has provided suggestions about what constitutes a small or large effect for the difference in means between two groups, for example, as a result of an intervention (in Field, 2009):

- *d* = 0.20 (small effect): A 0.2 SD between the means of the two groups.
- *d* = 0.50 (medium effect): A 0.5 SD between the means of the two groups.
- *d* = 0.80 (large effect): A 0.8 SD difference between the means of the two groups.

An additional method of explaining the data can be demonstrated by calculating the 'statistical power' of the experiment's results. Statistical power is a method of assigning a numerical value which indicates the probability that a study will consistently obtain a statistically significant effect. For example, a statistical power of .80 means that a study is likely to produce a statistically significant effect in the results 8 out of 10 times when repeated. As statistical power can't reach 1.0, no number appears before the period. The PPC effect sizes and statistical power

Table 1. *Pearson correlations coefficients of the survey results*

	M	*SD*	Conf to Comm	Desire to Travel Abroad	FLAs	Motiv	WTC
Confidence to Communicate	2.62	1.30					
Desire to Travel Abroad	2.85	1.27	.603*				
FLAs	3.81	1.46	.491*	.534*			
Motivation	3.10	1.28	.653*	.572*	.701*		
WTC	2.99	1.22	.633*	.526*	.704*	.813*	
International Posture	2.87	1.33	.504*	.510*	.610*	.752*	.721*

Note. *p < 0.01 level (2-tailed)

From "A correlation analysis of tech-based English activities and Japanese elementary student affective variables," by D. Ockert, 2015, *The Journal of Second Language Teaching & Research, 4,* p. 103. CC BY 3.0.

TABLE 2
The *M*, *SD* Before and After the Intervention, Effect Sizes, and Statistical Power (*n* = 29)

	Before Skype		After Skype		Mean Difference	Effect Size	Stat Power
Instrument Items	*M*	*SD*	*M*	*SD*			
FL Activities	3.14	1.70	4.10	1.16	0.96**	0.83	.77
International Posture	3.31	1.84	4.48	1.10	1.17**	1.06	.95
Motivation	3.17	1.70	4.10	1.16	0.93**	0.80	.74
Desire to travel	4.45	1.77	5.07	1.14	0.62*	0.54	.65

Note. **p < .01; *p < .05

Adapted from "Technology-enhanced language learning: Motivation and the brain," by D. Ockert, 2016, *Selected Papers from the 2016 PAC & the 25th Anniversary International Symposium on English Teaching*, p. 449. Copyright 2016 by the English Teachers' Association-Republic of China.

(Cohen, 1992b; Soper, 2016b) of the results are also provided in Table 2.

Table 3 shows the results from a principal component analysis (PCA) from an article which appeared in the *OnCUE Journal* (Ockert, 2015b). As can be seen, the formatting for Table 3 is different from that of the first two tables presented. Of the three tables presented in this column, Table 3 is the closest to APA formatting conventions. The table number is not followed by a period, and includes the table heading on a separate line below. The table designation comes above the heading and is not italicized. The heading is italicized with the content words capitalized, and both lines are aligned to the left. Also, notice there is no use of a period.

Should the data be presented with two or three digits to the right beyond the decimal point? This depends on the data in question and any 'cut-off' points for decision-making. For example, in Table 3 in the second column, Factor 2 *Active Pair / Team work*, the data for item 6, Grammar drills / practice, is 0.399. For this data presentation, the cut-off point is '4' for inclusion in a factor group, so this is very meaningful as it informs the reader that this specific item is just under the threshold of inclusion in Factor 2.

When using SPSS for the analysis, it is quite easy to present PCA results in table format—just use copy and paste. Also, be sure to include all of the results for all of the items, not only those that appear in a specific component / factor. Doing so allows the reader to compare the data across all three factors, as in Table 3.

This short article on presenting statistics is a brief look at what in reality can be a detailed and intensive topic. That being said, it is hoped that the information presented herein will be of use in helping readers format their papers for inclusion in future JALT—and other—publications. Good luck!

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Table 3
Results of Principal Components Analysis of the 12 Activities for all of the Students (N = 220)

Item number and name	Factor 1 *Traditional Activities*	Factor 2 *Active Pair / Team work*	Factor 3 *Brains*
1. Lecture (Listen to the teacher and stay in my seat)	**0.726**	0.157	0.030
2. Listening exercises (CD, tape or DVD)	**0.621**	-0.180	0.246
3. Dialogue / reading practice from the text	**0.705**	0.055	0.067
4. Writing exercises	**0.664**	0.171	0.134
5. Translation exercises	**0.421**	0.246	0.328
6. Grammar drills / practice	**0.424**	0.399	0.178

Note. Principal components analysis with Varimax rotation, with 49.321% total variance explained.

Adapted from "A placement level study: Do students enjoy traditional or communicative activities?" by D. Ockert, 2015, *The OnCUE Journal, 8*(1), p. 22. In the public domain.