STANDARD VERSUS HANDWRITTEN TAT PROCEDURES ON MEASURES OF WORD COUNT, PREFERENCE, AND THE OCCURRENCE OF DIALOGUE

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Word Count, Preference, and the Occurrence of Dialogue.

The purpose of the present study was to examine the effect a change in TAT administration would have on stories elicited. Two different TAT conditions were used: the standard oral procedure where subjects told their stories to an examiner who wrote them down, and a procedure in which the subjects recorded their own stories in writing. It was hypothesized that stories from an oral protocol would be significantly longer than stories from a written one, but that written stories would contain significantly more dialogue than oral ones. It was also hypothesized that subjects who participated first in the written condition would produce significantly shorter written stories than subjects who participated first in the oral condition. Also examined was whether or not preference for a particular protocol would increase productivity on that same protocol.

The study was comprised of 13 men and 15 women enrolled in

Introduction to Psychology at Emporia State University. They were divided evenly into 2 groups. Group 1 participated in the oral condition followed by the written condition; Group 2 proceeded from the written condition to the oral condition.

The results indicated that the difference in word production between oral and written protocols was not significant ($\underline{p} = .0777$). Preference for an oral or written protocol did not increase performance on the preferred procedure ($\underline{p} > .50$). Students who participated first in the oral condition did not produce longer written protocol than students who participated first in the written condition ($\underline{p} > .10$). That students would give more instances of dialogue in the written condition was also not significant ($\underline{p} = .057$).

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Approved for the Major Division

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Chapter 1

INTRODUCTION

As originally intended, the Thematic Apperception Test (TAT) is a projective technique administered in a clinical setting, the client verbalizing his or her response to the clinician. Researchers, in an attempt to circumvent the time-consuming labors of individual administration, have adapted the TAT to group situations. Comparisons between individual administration and group administration have been conducted in order to assess the equality, or inequality of the two different methods.

Pursuant to the idea of establishing the compatibility of group-written protocols to individual-oral protocols is the establishment of norms. Rosenzweig (1949) stated that through the use of norms, the TAT could gain the precision and objectivity of psychometric techniques, without sacrificing the advantages of its projective nature.

Unfortunately, many studies use group methods without adequate comparisons to the accepted, individual method and generalize their results freely to the individual test (Lindzey & Heinemann, 1955). The current literature abounds with apparent contradictions involving comparisons between group-written and individual-oral protocols.

In the existent literature, all studies comparing group-written and individual-oral TAT protocols show that verbal productivity is higher in the oral condition (Eron & Ritter, 1951; Lindzey & Silverman, 1959; Terry, 1952). Productivity is also linked to story quality (Proia, 1972; Terry, 1952) and it has been demonstrated that an increase in productivity can lead to significant changes of other variables (Lindzey & Silverman, 1959).

It has been shown that written protocols elicit happier stories (Eron & Ritter, 1951), and that they elicit sadder stories (Sarason & Sarason, 1958), when compared to oral protocols. There is also a question as to whether or not there are clear differences between the stories of males and females (Lindzey & Heinemann, 1955; Teevan, Greenfield, & Smith, 1982) and whether or not there are even significant differences between differing methods (Lindzey & Heinemann, 1955).

The Rorschach has also been modified in order to lend itself to group administration. Although the group Rorschach is more than marginally relevant, only a brief summary will be given to it. The first group Rorschach was conducted by Harrower and Steiner (1945). The cards were flashed upon a screen for three minutes and the subjects were asked to write down and number what they saw and where they saw it. Hire (1950) found that this alteration was valid in the sense that it compared favorably in terms of content and quality with exceptions from the individual Rorschach.

Harrower and Steiner (1945) also devised a multiple choice Rorschach. Here the subject was asked to select from a list of 30

possible responses the three responses which corresponded most closely to his or her own impressions of the cards. This multiple choice version made the scoring much easier; a trained examiner was no longer required. Of the 30 possible choices, 15 of them came from the protocols of relatively well-adjusted subjects, while the other 15 responses were comprised of protocols from subjects with various pathologies. The authors suggested a cut-off point of 40 percent, pathological responses being chosen 40 percent of the time or more.

This multiple choice version was criticized as being inadequate as a screening device (Challman, 1945; Jensen & Rotter, 1945; Wittson, Hunt & Older, 1944). Harrower and Steiner (1945) introduced the amplified multiple choice Rorschach in order to improve screening efficiency. In this version, 30 choices were The 30 choices were divided into 3 groups and offered per card. the subject was asked to choose 1 response in each group. Also, the subject was permitted to select any additional response that he or she saw fit. Again, there were "good" and "bad" responses; "good" responses were not weighted, while "bad" responses carried weights ranging from 1/2 to 2, the greater the weight the worse the The cut-off point for this version was 60 percent and response. over; borderline cases were defined as having scores ranging from 40 to 60 percent poor answers.

A study by Malamud and Malamud (1945) investigated whether or

not the amplified version could effectively discriminate between normals and psychiatric patients. They found that 21 percent of the normals as well as 18 percent of the psychiatric patients received at or above the 60 percent cut-off. The 40 percent score used to identify borderline cases was attained by 38 percent of the normals and by 47 percent of the psychiatric patients. The conclusion reached was that the test had not been sufficiently improved to permit the discrimination between normals and psychiatric patients, let alone more subtle distinctions.

Another version of the multiple choice Rorschach is the Structured Objective Rorschach Test (SORT). This test required the subject to give ten responses per card. Each blot had provided t10 triads, the subject being asked to select 1 response per triad. For ten cards, the total number of responses is 100, a number much greater than could possibly be expected under normal conditions. Langner and Hick (1966) demonstrated that the subjects were making forced choices.

It is interesting to note that alterations have occurred with both the Rorschach and TAT for the same reasons, to obviate the time-consuming efforts of gathering data by individual administrations. The Rorschach seems to lend itself better to modification, at least as far as Harrower and Steiner's (1945) first version goes, than the TAT. With the Rorschach, simple responses are given to very ambiguous stimuli; with the TAT, there

is more structure in the stimulus. The TAT also requires that the subjects give a detailed elucidation of the stimulus, a story, whereas the Rorschach simple requires that the subjects identify and locate what they see in the blot.

Clark (1946) attempted to find out how generalizable the TAT is from the standard clinical method to group administrations. Fifty subjects were divided evenly into two groups. Group 1 received the test in an altered clinical manner - slides were projected onto a screen and the subjects were allowed to record their own responses. Two weeks later, they received the group test. In the group test the subjects selected, from a number of options, the story that most corresponded to their own projection. Group 2 participated in the same conditions, the order reversed.

The major flaw in this study was the a priori assumption that written and oral methods of collecting TAT stories are somehow equivalent. There were no data to support this assumption at all. Apparently, the TAT was being reduced to a multiple choice selection process.

Baty and Dreger (1975) compared three methods of recording in order to assess their differential impact on TAT protocols. They discussed something called "personality revealingness", this term being defined by two measures:

The first was the number of needs, pressures, inner states, and defense mechanisms scored for each TAT protocol. The

second method involved correlating for three experimental conditions, the Nurturance, Succorance and Affiliation scales of the Group Personality Projective Test (GPPT) with TAT categories that closely resemble the GPPT scales in definition (p. 348).

Subjects for the study were 72 undergraduates from Louisiana State University, men and women being equally represented. The same examiner administered the TAT and GPPT to the subjects. The 3 experimental conditions used in the study were: subjects writing out their own responses; machine taped recording of the responses; and the traditional method of the examiner recording the responses. Not stated in this study, but clarified by Baty (1971), was that the TAT stories were from 4 different cards, the 3 conditions having a different set of 4 cards. The problem here is that card choice may, to some extent, dictate a difference in response level.

The study investigated whether or not a greater number of content categories would be revealed in response to a specific mode of recording. There appeared to be no difference, but they concluded that recording by the subject or by tape recording was probably more effective due to the information lost when the examiner recorded the protocol. To demonstrate this, in the condition where the examiner is recording, a hidden microphone was used to ascertain exactly how much material was lost. The tape

recorder had picked up a significantly greater amount of material $(\underline{p} < .02)$ than the examiner had been able to get when recording the same stories (Baty, 1971; Baty & Dreger, 1975).

Eron and Ritter (1951) investigated the possible differences between individually administered TAT protocols versus group-written administrations. Two groups of 30 subjects were used: Group W was composed of graduate and undergraduate students from the University of Wisconsin who received the individual administration. Group Y was composed of third-year medical students from Yale, who participated in a group administered test. In the individual condition, instructions were given according to Murray. Instructions for the group condition closely resembled these but stressed a written protocol. All subjects completed a series of 20 cards. Group Y completed the series 6 at a time, with 3 sets of cards, 2 individuals to a card. Four variables were analyzed:

1) The number of words per story. For the oral group there were two counts, the number of words up to the first question and the number of words total.

2) Emotional tone. This was rated on a five-point scale from happy to sad by the junior author.

3) The theme. Themes were organized under categories of equilibrium and disequilibrium by the senior author.

4) The level of interpretation.

Results showed that significant differences existed both between written and oral and between written and oral up to the first question, at the .001 and .01 levels, respectively. Although the total number of themes did not differ, the oral group contributed more themes of disequilibrium, the written group more themes of equilibrium. Under the level of interpretation, only 3 out of the 17 characteristics were significantly different. Comments about the "artistry" were 10 to 1, alternate themes 31 to 8, both in favor of the oral condition; humorous stories occurred 32 to 4 in favor of the written condition. A factor not accounted for was "flippancy"; this occurred 53 times in the written condition but did not occur at all in the oral condition. More stories in the written condition had a happy tone.

Although the oral group produced a far greater number of words, differences did not seem to exist in regard to content, the amount of thematic material elicited. These findings appear to demonstrate the compatibility between both methods of administration, as least as far as content is concerned. The composition of the two groups almost guarantees appreciable differences in regard to factors such as intelligence, interests and demographic variables which can influence TAT protocols (Lindzey & Heinemann, 1955).

Lindzey and Heinemann (1955) were interested in finding out to what extent a group administration of the TAT could be considered

equivalent to an individually administered TAT. In order to control group differences in comparing written and oral protocols, individuals participated in both the group and individual administrations. The group method was broken down in order to ascertain whether or not a time differential might influence performance. The group test was broken down into a five-minute and an eight-minute group. Their investigation focused on measuring variables of sex, achievement, happiness and dominance.

The subjects were 40 undergraduates from Harvard and Radcliffe colleges, men and women equally represented. Males were divided into 4 groups of 5 subjects. The 4 groups were: a 5-minute group and an 8-minute group, both groups followed by individual administration; the other 2 groups started first with the individual administration followed by 1 of the 2 group tests. Women were broken down in a similar fashion.

All subjects were given cards 2, 4, 13MF, and 14 under both conditions. Since these cards were used in both of the experimental conditions, a different story was requested in the second condition. At least one month elapsed between the two treatment conditions.

No significant differences were found between the individual and the group administration in regard to the major variables of interest, but there was a difference between the group conditions, the difference favoring the shorter version of the test. Finally,

"the capacity of the two methods of produce protocols that distinguish between male and female subjects appeared not to differ" (Lindzey & Heinemann, 1955, p. 53).

In contrast to this finding is a study by Sarason and Sarason (1958) who found that "the type of administration and sex of subject significantly affected the emotional tone ratings assigned to the stories" (p. 337). They did account for the fact that the major variables of interest in their study differed from those of Lindzey and Heinemann (1955).

Sarason and Sarason (1985) studied the variables of emotional tone and outcome rating scores to see how they are affected by the differences in group or individual administrations, also looking at possible differences between men and women. Enlisted in their study were 60 introductory students of psychology at Indiana University. The subjects were divided into 4 groups as follows: men receiving individual TAT administration; women in the same condition; mem receiving group administration; and women in the same condition. Twelve cards were used that were suitable for both men and women subjects. The groups ranged in size from 7 to 9 subjects. The groups ranged in size from 7 to 9 subjects, with both men and women in each group.

All stories were independently rated for emotional tone and outcome by the two authors who were blind as to the specific treatment condition of the protocols. The average inter-rater

reliability for emotional tone and outcome rating was .87 and .79, respectively.

This study (Sarason and Sarason, 1985) showed that the group administration of the TAT lead to significantly sadder stories than did the individual administration. This finding is contrary to the finding by Eron and Ritter (1951) which showed that subjects in a written-group procedure tended to tell stories of a happier tone than those subjects in an individual condition. A final finding was that women, no matter what treatment condition, tend to tell sadder stories than men.

A study by Teeven et al. (1982) compared oral and written TAT protocols on the variables of need achievement and hostile press. They hypothesized that significantly higher scores on measures of motivation would be garnered from oral responses, in comparison to written responses to the same stimuli. The subjects were 42 men, 19 women, age 14 to 16, who were divided into 2 groups which either spoke their responses into a tape machine or wrote out their responses on paper. Six slides were used. Group 1 was composed of 22 men and 11 women who wrote their responses to the 6 pictures. Group 2 was composed of 20 men and 8 women who gave their responses orally.

Comparisons for the variables were between groups within the same sex. Oral responses garnered higher motive scores than written responses for need achievement only, and men scored

higher on total need achievement than women.

Lindzey and Silverman (1959) compared procedures where images were projected onto a screen versus the direct use of the cards by the subject and whether or not it was better to have continuous exposure of the cards versus a limited time of exposure. Sex differences were explored in regard to productivity and also to examine the relationship between productivity and other variables of interest.

The subjects were 40 men and 40 women from Syracuse University. The cards used were 2, 4, 13MF, and 14. Subjects were divided into four groups:

1) Card projected on a screen with the exposure time of five minutes, including 20 seconds prior to the writing of their responses.

2) Card projected on a screen limited to 20 seconds prior to writing their responses.

3) Individual sets of cards with the exposure time the same as condition/group number one.

4) Individual sets of cards with the viewing time similar to that of condition/group two.

Stories were scored for 4 content variables of achievement, affiliation, dominance, and sex. Also scored were 12 formal variables.

Women scored higher with individual pictures while men scored

higher when administered cards by a slide projector. The best way to differentiate between men and women was the individual card procedure. Women tended to make better subjects, to tell better stories and their verbal productivity seemed to influence other variables under study. Also found was that "the correlation of verbal productivity with the eleven other variables was significant on the 5% level or below in every case" Lindzey & Silverman, 1919, p. 322). The researchers concluded by advising examiners to adjust TAT scores to minimize or eliminate the effects of verbal productivity upon other variables under study.

Terry (1952) studied verbal productivity as it relates to TAT protocols, studying the level of responses, which was described as follows:

Level of response is defined as the degree to which the subject is judged to have become involved in his story, as expressed through elaboration of plot and descriptions of emotional responses of the story character (p. 507).

In the first part of the study, 10 women sophomores at the University of Wisconsin were given 20 cards of the women's series. Five wrote their stories, 5 gave them orally. All of the stories were rated on a 10-cm line and grouped into 5 intervals, each interval representing a 2-cm segment of the line. Stories at the low end of the line involved card description; stories at the upper extreme involved card description; stories at the upper

involved the detailed elucidation of thematic material, showing more involvement in the story.

A similar study was conducted on 30 other college women. This time, so that more continuous data could be gathered, a one half cm. interval was used, the lowest interval was given a value of one, the highest interval a value of 20. It was found was that the 20 cards differed significantly in the level of response, that written stories were significantly lower in the level of response and that each subject had a characteristic response level.

Prola (1972) hypothesized that people with higher verbal productivity would have higher transcendence scores. The reason for this is that these subjects would proceed from an initial process of description to a further elucidation of thematic material. Subjects with lower verbal productivity will stop responding sooner and give responses that contain mere description.

Using a sample of 200 stories supplied by 60 men college students responding to 10 cards, each protocol was divided in half. It was found that the mean number of transcendent statements contained in the second half of the stories was significantly higher than the mean number of transcendent statements in the first half. This study and that of Terry (1952) further support the position of Lindzey and Silverman (1959) that increases in verbal productivity can influence other variables under study.

The possibility that word count may be a function of the

intellectual or verbal ability of the subject has been considered (Webb & Hilden, 1953). Two sets of measures were used to test this: Wechsler-Bellevue Intelligence Scale for Adults, to assess intellectual ability; and the Chicago Test of Primary Mental Abilities, Test W. to measure verbal ability.

Subjects for the first part of the study consisted of 44 men patients at a VA hospital who responded to ten TAT cards. Measures for word count were taken on cards 1, 4, 6BM, and 10 at the beginning, middle and end of their protocols. The mean 10 for these patients was 103. Word count on the 4 cards was correlated with obtained IQ and a correlation of $\underline{r} = .40$ was obtained, significant at p < .01.

The second part of their study dealt with verbal fluency and consisted of a non-clinical group that ranged in age from juniors in high school to juniors in college. The TAT cards were given first with one-half of the subjects receiving the regular TAT cards and the other half receiving reproductions of the same cards, the same in all respects but with the women characters substituted by a men. These subjects were shown the cards on a screen and they were allowed 12 minutes to write on each card. It was found that the correlation between verbal fluency and TAT word count was $\underline{r} = .50$, significant at $\underline{p} < .01$.

It was not stated why in each of these studies either an oral

or a written protocol was used, with no comparison between the two. In any case, there is no telling what information might have been garnered had the authors decided to compare written with oral in each of the procedures.

Although written protocols have been used in an attempt to establish norms for the TAT, these written procedures have always occurred in a group setting. This group setting may unduly influence the responses of the subject, his or her responses being mediated by an increased feeling of anonymity.

The purpose of the present study is to compare oral and written protocols, but to do so under conditions that are similar. Both procedures took place in the same room in order to minimize the effects inherent in a change of setting. Also, both the written and oral procedures took place on a one to one basis, the written protocol did not take place in a group. It is hypothesized that:

1) Although there will be more verbal productivity in the oral condition, a person's preference to the treatment condition will influence the way in which he or she responds to the different conditions.

2) Students who participate in the written condition after completing an oral protocol will procure more words than students who participated in the written condition before giving an oral protocol.

3) In the written procedure there will be more dialogue involved in the stories.

Chapter 2 METHOD

Subjects

Twenty-eight students were used for this study. Recruits were volunteers from Emporia State University's Introduction to Psychology classes. Included in this sample were 13 men and 15 women with a range from 18 to 37 years of age and a mean age of 22.11 years.

Apparatus

Thematic Apperception Test cards were used to elicit stories from the students. Although 10 TAT cards are normally used per protocol (Bellak, 1971), due to the discrepancies between the men and women series, only the 6 cards common to both series were administered. Set A for men and women included cards 1, 3BM, and 13MF. Set B for men and women included cards 2, 4, and 11. Although card 3BM is not typically used in the women series, it was included because Bellak (1971, p. 47) states that it is an appropriate card for both men and women subjects.

One room was used for both experimental procedures. The room was furnished with a table, two chairs and a blackboard facing the student. Printed on the blackboard were the words "before," "now," "thinking and feeling," and "turn out," similar to the procedure by Eron and Ritter (1951). This procedure was done as a reminder to the student to give all the parts that make a complete story. Use of pen and paper was dependent upon which experimental condition applied. In the oral condition, the administrator had use of pen and paper to write down the students' stories; in the written condition, pen and paper were used by the students to write down their own stories. At the end of the first condition, pen and paper were switched in accordance with the change of procedure. <u>Procedure</u>

Testing sessions were scheduled at the time of recruitment. Before administering the TAT cards, the student was read the following instructions (Bellak, 1971):

This is a test of imagination, one form of intelligence. I am going to show you some pictures, one at a time; your task will be to make up as dramatic a story as you can for each. Tell what has led up to the event shown in the picture, describe what is happening at the moment, what the characters are feeling and thinking; then give the outcome. Speak your thoughts as they come to your mind. Do you understand? Here is the first picture (p. 37).

These instructions were read as written only if the student started with the oral condition. If the student started in the written condition, the word "write" was used in the place of the words "tell" and "speak". Students were administered three TAT cards under both conditions, the oral condition and the written condition.

After completing the stories from the first part of the experiment, the student was reread the instructions. The instructions were changed this time to conform with procedure, as previously mentioned. After being read this second set of instructions, the students were given the second set of three pictures.

The experiment was designed in the following manner, with the students divided between the two groups:

Group 1 involved students who experienced the oral condition (0_1) prior to the written condition (W_2) .

Groups 2 involved students who experienced the written condition (W_1) prior to the oral condition (0_2) .

To eliminate possible effects associated with a set of cards and a specific protocol, one-half of the students in both groups started with cards from Set A. The other half started with cards from Set B.

After completing all six of the TAT cards, each student was asked questions in regard to his or her age and class standing, the sex of the student being noted. Also asked was whether or not the student preferred one condition over the other.

The data collected were frequency data: counts made were the number of words used and the number of times dialogue was used per story. <u>T</u>-tests were used to analyze each of the specific hypotheses, significant at the .05 level. The specific hypotheses to be analyzed were the following:

1) Oral protocols would be more productive (have a higher word count) than written protocols.

Students who preferred the written protocol would be more productive in the written procedure than students who preferred the oral protocol. Likewise, students who preferred the oral protocol would be more productive in the oral procedure than students who preferred written protocols.
 Comparing written protocols, the students who participated in the written procedure first would be less productive than students who participated in the written protocol.

4) More dialogue would be contributed by students in the written procedure.

Chapter 3

RESULTS

Frequency count data of the total number of words per story and the number of times dialogue was used per story were analyzed. The statistical procedures employed in the analysis of the four specific hypotheses were analyses of variance (ANOVAs).

A 2 X 2 X 3 ANOVA was performed on word count data. The factors were: 1) Order of presentation (oral-written vs written-oral); 2) Mode of response (written vs oral); and 3) TAT card (card 1 vs 2 vs 3). In comparing the subjects who responded in the oral written order to the written-oral order, no significant differences were found for word counts, $\underline{F}(1, 26) = 2.249$, $\underline{p} > .10$. Also not significant was the mean number of words per card effect, $\underline{F}(1, 26) = 2.502$, $\underline{p} > .10$. See Tables 1 and 2 for specific means and standard deviations.

Means and Standard Deviations of the Effect of Mode by

Order on Word Count

			and the second
MODE,	ORDER	MEAN	<u>S.D.</u>
ORAL,	OW	58.833	25.117
ORAL,	W0	72.714	43.715
WRITTEN,	0W	59.762	29.220
WRITTEN,	WO	85.167	58.852

Table 2

Means and Standard Deviations of the Effect of

Mode on Word Count

MODE	MEAN	S.D.
ORAL	65.774	36.116
WRITTEN	72.464	47.916

To analyze the effects of preference for oral vs written, a 2 X 2 ANOVA was performed on total word count data. The two factors were: 1) Preference (oral vs written) and 2) Mode of response (oral vs written). The mode by preference interaction was not significant, F(1, 26) = .0003, p > .50. See Table 3.

Table 3

Means of the Effect of Preference on Total Word Count

	ORAL	WRITTEN	PREFERENCE
 Total Word	206	220	Written
Count	180	201	Oral

The hypothesis for a "warm-up" effect for written responses, the students participating in the written condition after having completed the oral condition would have a higher word count than students who participated first in the written condition, was analyzed using a one factor ANOVA. The one factor was order, oral-written vs written-oral, the ANOVA performed on word count totals for the written response mode. No significant differences were found, $\underline{F}(1, 26) = 2.804$, $\underline{p} > .10$. See Table 4.

Means and Standard Deviations of the Effect of

Order on Written Total Word Count

ORDER	MEAN	S.D.
O–W	179.286	80.691
W-O	255,500	149.957

A 2 X 2 ANOVA was performed on total word count data and it showed that men and women did not differ in the length of their responses, $\underline{F}(1, 26) = 1.142$, $\underline{p} > .20$. The sex by mode of response was not significant, $\underline{F}(1, 26) = .293$, $\underline{p} > .50$. See Table 5, next page.

A 2 X 2 X 3 ANOVA was performed on dialogue count data. The factors were: 1) Order; 2) Dialogue mode; and 3) Card. Statistical significance was not found in the dialogue mode, <u>F(1,</u> 26) = 3.957, <u>p</u> = .057, with oral and written means of .024 and .107, respectively. See Tables 6 and 7.

Means and Standard Deviations of the Effect of

Mode by Sex on Total Word Count

MODE,	SEX	MEAN	S.D.
Oral,	F	214.400	90.025
Oral,	М	177.615	99. 110
Written,	F	240.200	148.339
Written,	M	191.077	87.929

Table 6

Means and Standard Deviations of the Effect of

Dialogue Mode on Dialogue Count

MODE	MEAN	S.D.
Oral	.024	.153
Written	.107	•440

Means and Standard Deviations of the Effect of

Dialogue Mode by Order on Dialogue Count

MODE,	ORDER	MEAN	S.D.
Oral,	O-W	.024	.154
Oral,	W-O	.024	•154
Written,	O-W	.024	.154
Written,	W-O	.190	.594

Two students reported dialogue in the oral condition and five students reported dialogue in the written condition. Unfortunately, there was not enough variance in this data to perform a reliable statistical test.

Means and Standard Deviations of the Effect of

Dialogue Mode by Order on Dialogue Count

MODE,	ORDER	MEAN	S.D.
Oral,	0W	.024	.154
Oral,	W-O	.024	.154
Written,	OW	.024	.154
Vritten,	WO	.190	.594

Two students reported dialogue in the oral condition and five students reported dialogue in the written condition. Unfortunately, there was not enough variance in this data to perform a reliable statistical test.

Chapter 4

DISCUSSION

In analyzing the results of this study, it can readily be seen that none of the specific hypotheses were confirmed. The most surprising result was the comparison of word counts; the oral response mean was 65.77, compared to the written response mean of 72.46. Although this comparison was not significant, there was a written mean greater than the oral mean. Recall that in virtually every study cited, word count for oral responses were always significantly greater than the word count for written responses. There is no readily apparent explanation for the difference between the findings of the present study and past results.

In regard to the second hypothesis, a preference for a protocol increasing the performance on that protocol, there was no significant influence. Preference for an oral or written procedure did not seem to influence performance.

The question of what it might mean for a person to prefer a particular protocol seems obviously problematic. From an examiner's standpoint, to prefer a certain protocol would suggest that a subject would give longer, more informative responses. Students participating in a psychology study for extra-credit might tend to have a more expedient definition of preference, what is preferred might simply be what is easiest; the least costly in terms of time and effort. The ambiguity in the application of this term with this particular study is obvious with hindsight.

The third hypothesis, that persons who participated in the written condition after the oral condition would produce longer stories than persons who participated first in the written condition was not confirmed. Written responses were slightly longer when the written condition came first (85.167) as opposed to second (59.762).

A tacit assumption of the third hypothesis is that the oral response would be statistically longer than the written response. It was assumed that the telling of a story would be better facilitated by the oral condition and that, further, the persons who participated in the oral condition first would have their written responses influenced, and hence longer, by this first condition.

The fourth hypothesis, that persons would give more dialogue in written response was not confirmed statistically. The mean value of the occurrence of dialogue was extremely low, .024 for oral, .107 for written.

It was assumed that dialogue would occur more frequently in written protocols so that a different kind of involvement with the TAT test might be evidenced. The quality of this dialogue response, whether its presence in a story would indicate more or less involvement with the story was beyond the scope of this study. It is easy to see how dialogue might represent more involvement in the story by giving voice to the characters on the cards; indicative of less involvement would be using dialogue to document a conversation instead of telling a story. In any case, the occurrence of dialogue being so infrequent would tend to dismiss dialogue as an important, or even interesting, factor to study in terms of written protocols.

Although none of the hypotheses were confirmed, the difference between written and oral protocols seemed minimal; the results of this study showed greater word count for the written protocol, but not a significant difference. Further research into the relationship between oral and written TAT protocols could possibly clarify the equivalence, or lack of equivalence, between the two procedures. The importance of this cannot be underestimated, for if the two procedures were deemed equally valid, the time spent by a clinician in the administration of the TAT could be better utilized.

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