To examine the effects of background and personality on the attitudes of developing writers, a study surveyed and interviewed 17 high school students from a 1988 summer school writing class (an in-house Rural Scholars Program sponsored by the Continuing Education Office at Indiana University of Pennsylvania). Students completed a questionnaire about their home, school, and community, and each student was interviewed to verify answers on the questionnaire. The Daly and Miller Writing Apprehension Scale (WAS) was given to determine how students felt about writing, and the Keirsey Temperament Sorter (KTS) was administered to determine personality traits. Two writing samples from each student were analyzed to correlate findings with results from the WAS and KTS, and two case studies were analyzed. Results revealed a significant correlation between writers' attitudes and their personality traits, writing apprehension, and writing background. Eight of the ten students who tested "extraversion" on the KTS were not writing apprehensive. The four students labeled "introversion" in their writing had no difficulty writing as long as it was teacher directed. (Case studies of two students and three figures are included, and three tables of data and 31 references are appended.) (MM)
HOW PERSONALITY AND BACKGROUND AFFECT WRITING ATTITUDES

Abstract

This study describes the effects that background and personality have on the attitudes of developing writers. One goal of the study was to simply describe the effects of these two variables on high school writers which could have implications for curriculum development and teacher training.

The study employed qualitative research and descriptive statistics. The researcher analyzed questionnaires, interviews, observations, and the results of two different tests in an attempt to discover factors that influenced students' attitudes about writing.

The study also examined two case studies which yielded results worth analyzing for an even larger sampling.
Attitudes 3

HOW PERSONALITY AND BACKGROUND AFFECT WRITING ATTITUDES

The questions which this study set out to address were:

1. What traits in students' personalities affect their attitudes about writing?
2. What factors in students' home, school and community environments influence their attitudes about writing?

Design and Procedures

Introduction

The design of this study relied upon qualitative methods of data collection and analysis, with findings reported in the form of a description. The methods of observing and interviewing were consistent with those of other researchers completing case studies which involve information-gathering techniques (Perl, 1979, Pianko, 1979). In this study, personal interviews and questionnaires were employed to gain information about the participants' home, school and community backgrounds. A method utilized in finding information about students' personalities was recording field notes while talking with and observing the participants. In addition, two tests, Daly and Miller Writing Apprehension Scale (WAS) and Keirsey's Temperament Sorter, were administered. This study followed a
Attitudes 4

triangulating research design, using "a variety of strategies to reduce threats to reliability and validity" (LeCompte & Goetz, 1982).

Review of the Literature

The theory that there is some correlation between writing attitude and individual personality/background is not a new one. Jensen and DiTiberio (1984) found a significant relationship between personality and writing in observational studies they did. Bennett (1983) completed case studies involving home and school influence on writing attitudes of 15- to 17-year-old students. Harste, Woodward and Burke (1984) discussed sociolinguistic factors (including home, school and community) that affect children's attitudes toward literacy. Shirley Brice Heath (1985) discovered differences in attitudes about writing in the three communities she studied. Langer (1986) focused on writing attitudes of children at home and school. Another important study on students' attitudes about writing was completed by Brittain (1977). Other research (Perl, 1979; Pianko, 1979, and Emig, 1971) details factors involved in writing and how elements of attitude and writer's history influence this process.

Assessment of Design

Although no previous research was found exacting a similar study, the researcher provided sufficient evaluative criteria to
support credibility. In this study, external reliability was not affected by 1) researcher status position or 2) data collection methods. In order to reduce threats to internal reliability, low-inference descriptors such as researcher/participant conversations, field notes and a naive observer were used in the ethnography. One source of supporting information received from the written interview was an oral interview with each participant; this was conducted in an informal setting which tended to strengthen the validity of the study. The loss of two members of the study was considered a normal process in group work. (Goetz & LeCompte, 1984)

Selection of Sample (Participants)

A 1988 summer school writing class of seventeen high school students was selected. These students were part of a special in-house Rural Scholars Program sponsored by the Continuing Education Office at Indiana University of Pennsylvania in Indiana, Pa. The intention of the five-week session involving rising high school seniors was to expose students to college life. A criteria for their selection was that these particular students might not be entertaining the idea of attending college upon high school graduation. Students resided in the dormitories, ate meals in the school cafeteria and attended two college-level classes, composition and history.

Students in the composition class completed assignments according to the writing process model, wrote short papers about subjects in which they were interested and finished a research paper
on a topic of their choice.

The findings here are based on 15 of the original 17 participants in the program as well as in-depth reporting on two of the students. These two were selected because they willingly volunteered to participate.

Ten females and seven males were involved in the study. All students lived within a 35-mile radius of the college campus. They attended class during the week, went home on Friday afternoon and returned to campus on Sunday evening of each week.

Data Collection

Students completed a questionnaire about their home, school and community, using the Likert Scale. Also, the researcher personally interviewed each student to verify answers on the questionnaire. The Daly and Miller Writing Apprehension Scale (WAS) was given to determine how students felt about writing and the Keirsey Temperament Sorter (K.TS) was administered to determine personality.
traits. Two writing samples from each student were analyzed in an attempt to correlate findings with results from the WAS and KTS. In addition, two case studies were used in this research.

See Figure 1 below.

Figure 1.

Interactive Methods for Data Collection

Field Notes
Written/Oral Interview Transcripts

Non-interactive Methods for Data Collection

Writing Apprehension Scale (WAS)
Keirsey Temperament Sorter (KTS)
Students’ Observation Essays
Naive Observer
Student Questionnaires

Questionnaires. All participants were given a list of 14 questions to which they answered by circling the appropriate number 1, 2 or 3. (1=never; 2=sometimes; 3=always) Questions 1 through 5 related to elementary school writing. Questions 6 through 9 concerned writing experiences in high school. Questions 10-12 related to home influences and the last two questions dealt with their writing experiences in the community. With time as a major constraint, this form of information was a quick yet reliable instrument for
measuring attitudes (Fuchs 1980).

See Table I in Appendix for results.

**Writing Apprehension Scale (WAS).** The Daly and Miller (1975) Writing Apprehension Scale was administered to all students. From answers circled on the WAS, the researcher subjectively determined whether or not students were "writing apprehensive." A scale of 1 to 10 was used, 1 indicating "writing apprehensive" and 10 indicating "not writing apprehensive."

See Figure 2 below.

![Figure 2](image-url)

**Figure 2.**

**Daly and Miller Writing Apprehension Scale Results**

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative (6-10)*</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Positive (1-4)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Neutral (5)</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

*Not writing apprehensive

**Keirsey Temperament Sorter.** Modeled after the Myers-Briggs Inventory (MBI), this test was given to all students to determine personality traits as determined by Jung's theory on psychological types applied to writing. Myers (originator of this test) believed that healthy personality development consists of learning to use preferences more expertly but not rigidly or exclusively. Applied to writing, writers...
should use their preferred processes but concentrate on their unpreferred processes to round out their writing. (See Tables II and III in Appendix.)

Interviews. Each person was interviewed outside of class to verify answers given on the questionnaire. The interview was also an opportunity for this researcher to obtain first-hand knowledge about students' personalities which was used to verify the results of the Writing Apprehension Scale and the Keirsey Temperament Sorter.

Field Notes. The researcher kept a log of conversations, interview information and informal observation of students and their writing to verify test results.

Student Writing. Final copies of an observation essay written by students was analyzed to also find a correlation between what they wrote and their personality traits.

Naive observer. The researcher used a person who had no knowledge of any of the variables of the study, including the participants, to read, analyze and label each student observation essay according to the KTS. Again, the results were used to add validity to the research. The naive observer and the researcher independently examined certain qualities in students' writing such as voice,
style, structure, organization and mechanics. The criteria used were subjective in nature, researcher-developed, but they lent additional support to the findings.

See Figure 3 below.

Figure 3.

Analysis of Personality as seen in Observation Essay

<table>
<thead>
<tr>
<th></th>
<th>Naive Observer</th>
<th>Researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extravert Females</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Introvert Females</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Extravert Males</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Introvert Males</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

DISCUSSION

The data collected in this study revealed a significant correlation between writers' attitudes and the following: I) personality traits; II) writing apprehension; and, III) writing background.

I. Out of the 15 students in this study, four females and six males were labeled "extravert" (Jung's spelling) as applied to their writing; four females and one male were determined as "introvert" from results on the Keirsey Temperament Sorter.

Jung's explanation of personality as applied to writing goes like this: Extraverts like to: 1) talk about the topic with others
and interview other people for ideas; 2) "freewrite" as a way of
developing ideas; 3) wait until they have written a first draft
before they do any kind of outlining; 4) interact with others,
discussing revisions. Introverts like to: 1) follow the composing
process the way it was traditionally taught; 2) have most of their
ideas clarified before they write; 3) pause frequently during their
writing to plan further; 4) write alone, asking for advice from
close friends or the teacher. (Jensen & DiTiberio 1994)

The following comments were made by students about why, how or
what people write (Hartwell 1985):
I=Introversion   E=Extraversion

E -- "I just do my own thing when I write...sometimes blow off
steam...seems if you write things down you feel better, you know.
It’s also neat to get credit for something you write." (Student was
3 on the I/E Scale o’ 1 to 10)

I -- "Getting started is the most difficult because I have, uh,
all these different ideas and don’t know which one to use, really, I
don’t know which one the teacher wants." (5 on the I/E Scale)

E -- "Writing is a reflection of a person’s character. It’s an
individual thing." (10 on the I/E Scale)

I -- "People learn to write by reading what other people have
written and wanting to express their thoughts about it." (2 on the
I/E Scale)

E -- "I like to write...I get this semi-intoxifying effect, you know, kind of like a buzz." (6 on the I/E Scale)

I -- "I begin my sloppy copy after I get all my ideas down.
After I finish my sloppy copy, I read and check grammar and spelling
and things like that. Then, I'm ready to do the final copy." (3 on the I/E Scale)

II. A second area examined in this study was the Daly and Miller (1975) Writing Apprehension Scale. A scale of 1 to 10 was used to measure students' writing apprehension, 1 being most writing apprehensive and 10 not writing apprehensive. Thirty statements were measured using a Likert Scale and this researcher categorized students according to the number they circled. For example, while Sandy, given a score of 5, was apprehensive about submitting her writing for publication or discussing her writing with others, she did like seeing her thoughts on paper and used statements like "I am good at writing" and "It's easy for me to write good compositions." Therefore, she was labeled as being directly in the middle of the scale. One other student also fit this category.

One of the lowest scores on the WAS (2) was made by Vince. He disagreed with such statements as "Writing is a lot of fun," "People seem to enjoy what I write," and "I enjoy writing." Vince also agreed with WAS statements such as "Taking a composition course is a very frightening experience" and "I expect to do poorly in a composition course even before I enter." In addition, one female and male scored a 4 and were also determined to be writing apprehensive.
On the other end of the scale is Marie who strongly disagreed with statements such as "I avoid writing" and "Expressing ideas through writing seems to be a waste of time." Several statements she agreed with were "I like to write my ideas down," "Discussing my writing with others is an enjoyable experience," and "Handing in a composition makes me feel good." Another female, Lori, one of the case studies, had a score of eight, along with two males. Another female scored seven and three students, two females and one male, scored six each.

Refer to Figure 2 in the body of this text and Table III in Appendix for further information.

III. The written questionnaire, followed by an oral interview, focused on questions in four general areas. The researcher wanted to find out what influenced the students' attitudes about writing as early as elementary school, presently in high school, at home and in the community. Responses were not divided according to gender but were scored using, again, the Likert Scale.

Responses about the kinds of writing done in elementary school were as follows: 1) Seven students remembered never even wanting to write in the primary grades and eight said they sometimes wanted to try to write. 2) Eight students said they never had elementary teachers who made them want to write and four answered "sometimes." 3) Three students said they liked writing stories in elementary school, six said they sometimes did and six said they always liked
writing stories. 4) When asked about writing reports (like history or science), eight students said they never enjoyed that activity and seven said they sometimes enjoyed report writing. 5) Four students said they never had to write sentences for punishment in elementary school, but seven said they sometimes did and four said they always had to write sentences for punishment.

Another area of students' writing background that this researcher explored was their high school influence: 1) Two students said they never liked writing creative pieces like short stories and poetry, four said they sometimes enjoyed that kind of writing and nine students said they always liked writing "creatively." 2) Four students said their high school teachers never inspired them to write, six said their teachers sometimes did and six stated that their teachers always made them want to write. 3) Three students said they never enjoyed writing in any of their classes, eight said they sometimes did and three said they always enjoyed writing in their classes. 4) Twelve students said they never had to write for punishment reasons in high school and three said they sometimes did.

When students in this study were asked about the influence of their home environment on their writing, they responded: 1) Five students said nobody in their home ever asked them anything about their writing, six students said sometimes a parent or sibling asked to look at something they had written and four students said they always were asked about their writing. 2) Four students said they never had anyone in the home read their writing, eight students said they sometimes did and three students responded that they always had
someone in the home read their writing. 3) When asked about having a question about a piece they were writing, only one student said she never received any advice or help at home, three students said they sometimes did and eleven students said they always received help on their writing from someone at home.

The majority of students claimed to never do any writing in any of the church or community organizations to which they belong; 13 out of the 15 said they never wrote in any groups such as neighborhood clubs, Scouts or 4-H, or church.

A fourth area of interest was the rating of the observation essays by a naive observer, named this term in this study for reading through, or "observing," students' personalities as perceived by their writing. Using such criteria as voice, sentence structure, organization and content, the researcher and the naive observer agreed on the labels of I or E for all but two of the 15 student essays.

David was labeled Extraversion in his writing by both the researcher and the naive observer. Lines like "The leaves themselves, shaped like the mittens of children, are the many masks that I hide my weaknesses behind" and "The golden yellow sun is like my eros, the tiny spark that seems to make my sufferings worthwhile" were marked by both readers as "Extravert." David was not afraid to expose his innermost feelings on paper, writing what HE actually felt as he described the park. He wrote: "...it is like a trip into the deepest depths of my soul." Not only did David describe the
park, but he tended to universalize the experience, a criteria both
the researcher and the naive observer noted as being "extravert."

Another example of agreement between the researcher and the
naive observer was with Victor's writing. He was characterized as
"Introvert." Victor seemed to describe his immediate surroundings,
not really how he felt or how he fit into that environment. There
was no revelation of feelings with Victor's writing. He simply wrote
about what was there -- squirrels, wind, trees, students,
professors, birds, etc. He was not able to describe or see the park
for what it afforded him as a writer; furthermore, he seemed to only
view the surroundings as a writing assignment.

One of the two essays on which the raters did not agree was
Susie's description. The naive observer ranked her as "E" because
the writing was freeflowing; the writer was not afraid to express
true feelings about her "own little world." Sandy wrote about the
student center but, because she only described people or objects
around her, the researcher felt the writing exhibited qualities of
"Introversion."
Case Studies

Lori

Lori was one of the most outgoing students in the program. Friendly, as well as pretty and petite, she was mature in her thinking, talking and writing. A 17-year-old senior in a neighboring town, Lori’s personality fit into the mold of “Extravert” discussed in the Keirsey Temperament Sorter. She tended to generate ideas best from talking about the topic or interviewing others both of which she said she enjoyed. Not afraid of speaking in front of her classmates or teacher, Lori seemed proud to share her own ideas as well as receive ideas from other students.

When asked about how people write, Lori responded: “All people have different methods of writing. Some follow certain system they were taught and others, like me, like to do their own thing. I just write spontaneously. Then, after I pour out all of my thoughts on paper, I go back through and put in transitions where they’re needed. Sometimes this works for me and sometimes I have a hard time.”

Lori had a somewhat carefree attitude about her work in the composition class. She always managed to get the work done, she said, but she certainly didn’t worry about it.

Lori: “I don’t worry about the writing. I like doing it; sometimes it’s a way of blowing off steam, you know, a good release. Makes you feel better, too. And, when you finish, there’s such a
Lori was confident when talking about her writing. She liked to write in all of her classes and was not afraid to share her writing with others.

The following are Lori’s responses to interview questions the researcher asked about elementary school, high school, home and community.

In elementary school, Lori remembered wanting to (and attempting to) write. "I'd see bigger kids writing and I'd try. About the only thing I could do was put curly-cues, you know, loops, on the words I had printed. I guess that was about the second or third grade.

"I didn't really enjoy writing in elementary school, I mean, when I had to. You know, you'd have to do book reports or history papers, and I didn't like doing those."

Lori remembered having to write sentences for punishment in elementary school. "I remember doing that for talking -- (laughs) 'I must not talk in class' 500 times.

"In high school, I like writing short stories and poetry and my English teacher lets us do that a lot -- I didn't really do that much creative writing in elementary school.

"She's (English teacher) really cool; she sort of lets us do what Dr. Rafoth (IUP professor) does--you know, decide what we want to write about and then write. I've had her for two years now and she is my advisor on the newspaper staff.

"At home, my Mom also reads my stuff and tells me, usually, 'this is good' or 'couldn't you do this different?' She tells me
what a good writer I am. I mean, I know that she might not mean that for some of the papers I write, but she says it anyway. Makes me feel good.

"I never have to write outside of school and home, I mean doing homework at home."

The researcher observed Lori jotting down ideas in list form when preparing to write. Then she did "freewriting"—this she called her first draft and said she did this "to get all my ideas down on paper so I won't forget them."

Lori appeared to have no problems getting her ideas down on paper; she also liked to talk about her writing ideas with other students and the teacher.

The researcher "labeled" Lori an extrovert from the very first interview. Not only was she outgoing and friendly, she had self-confidence about everything (herself and her writing) that was quite evident. On the WAS, she was negative. The KTS said she was a predictable extrovert. Also, the naive observer and the researcher pointed to the extravert qualities in the observation essay Lori wrote.
Margaret, although very shy, agreed to be one of the subjects for in-depth analysis in this study. The only overweight female in the program, she seemed to be immature. From the initial interview, the researcher classified her as an "Introvert," and she scored "2" on the Keirsey Temperament Sorter. She had little difficulty writing and tended to have a storehouse of information for writing, so much that she never depended on others for any help. Margaret did not like sharing her work with other students in the program; she did, however, like for the teacher to read her drafts.

What follows are parts of several interviews Margaret had with the researcher:

R: How do you think people write? What steps do they follow?

M: I think most people think about an idea first. The idea is researched by sources of information. Then, people take notes on the subject and try to write a rough draft and proofread it. Changes are made and another draft is written. Changes are made over again until a rough draft is written that suits the writer and the teacher. After completing this rough draft, a final proofreading is done. A final good copy is either typed or clearly written to be handed in.

R: What do you remember about writing in elementary school?

M: I remember doing some when I was in the first or second grade. No, I guess (laugh) it wasn't then; maybe it was third or fourth grade. I used to like to write stories then. I liked writing some things in history or science class then, too. I had to write sentences many times for chewing gum. That wasn't fun. UGH!
R: What kind of writing do you do in high school?

M: I like to write poetry best of all, but we don’t do that kind of writing, really, in high school. You know, we have to write the proper way, in one of the types of writing (researcher learned they were descriptive, expository, etc.) to get us ready for college. Essays are what I write most, uh, with a topic that is given to the class, in English, say, or history. I like to write sometimes when I can think of something to write about. You know, that’s hard.

R: Does anybody help you at home with your writing?

M: Sometimes my mother will look at something I’ve written, but she can’t help me. My older sister can’t help either. She says I am a better writer than she is. So, when I’m writing at home, I am pretty much on my own.

R: Do you ever do any writing in any clubs, at church or any community organizations?

M: No, I don’t ever write anything at church or anywhere else, you know, besides school.

Margaret explained to the researcher that she had never written using the particular method that her summer class advocated. She had always written a draft, checked it over for misspelled words and recopied it so that it was neat enough to hand in to the teacher.

The naive observer and the researcher agreed that Margaret’s observation essay was typically “introversion.” She described things around her; one paragraph methodically followed another and there
was no indication of her inner feelings in the essay. Language was wordy and stilted, one characteristic of the writing style of "introversion."
SUMMARY OF THE FINDINGS

Analysis of the data collected in this study revealed several interesting findings about high school students' attitudes toward writing.

One pattern that emerged was the relationship between extroversion and writing apprehension. Eight of the ten students who tested "extraversion" on the KTS were not writing apprehensive. It was apparent from what these eight students wrote and talked about that they used their writing as an opportunity to interact with people, a characteristic that Jensen and DiTiberio describe (p. 288) is identifiable with this psychological type. For example, this researcher noted these students' behavior in peer groups eliciting suggestions and helpful responses for their writing. The researcher interviewed all 10 students who explained their writing process as a "catch as catch can" method. In other words, they felt no pressure; if they made a good grade, that was fine -- if not, that was also fine. All ten students did freewriting, used no outlines, and nine of the ten did what Peter Elbow (1981) suggests by sometimes writing without really having anything to write about. Only two of the ten students said they had experienced "writer's block" (Rose 1981) in the Rural Scholars Program when the researcher explained this term, although all complained of having felt a block when they had to write a "timed essay" at school with no chance of revision. In general, these students liked the idea of sharing their writing with their classmates and with outsiders.
Four students were labeled "introversion" in their writing with the most serious reflected by a female who scored two on the KTS and four on the WAS. Typical of the characteristics of Jung's introversion, these students had no difficulty with writing an essay, as long as it was teacher directed. These four revealed their fear of allowing anyone other than the teacher to see their work. Many of their revisions revolved around lower-order concerns (Reigstad and McAndrew 1984), focusing on correction of surface errors.

Three of these four students said they did not like to write; the one student who did "like to write" was a "5" on the KTS and "6" on the WAS, which almost places her into the categories of "E" and "not writing apprehensive."

This study suggests significant correlation between those students who were labeled as "E" on the KTS and also determined to be negative on the WAS. The data also points to factors in the home, school and community environments that influence writing attitudes; much more can be researched in this area.

Researchers continually search for ways to overcome writer apprehension. Perhaps an investigation of writers' backgrounds and personalities might just yield information that could be useful in the classroom. This researcher suggests that exploration be made into the influential factors of home, school and community on writing attitudes and that further studies in personality might be helpful in composition research.
REFERENCES


Daly, J. A. & Miller, M. D. (1979) The empirical development of an instrument to measure writing apprehension. RTE, 2, 242-249.


<table>
<thead>
<tr>
<th>Table I</th>
<th>Student Questionnaire Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I liked to write in elem. school.</td>
<td>Never: 7</td>
</tr>
<tr>
<td>2. I wanted to write in elem. school.</td>
<td>8</td>
</tr>
<tr>
<td>3. I liked writing at home when I was in elem. school.</td>
<td>3</td>
</tr>
<tr>
<td>4. I enjoyed writing reports in elem. school.</td>
<td>8</td>
</tr>
<tr>
<td>5. I wrote for punishment in elementary school.</td>
<td>4</td>
</tr>
<tr>
<td>6. In high school, I like writing poetry and short stories.</td>
<td>2</td>
</tr>
<tr>
<td>7. I get opportunities to write the way I like in high school.</td>
<td>8</td>
</tr>
<tr>
<td>8. I enjoy writing in my high school classes.</td>
<td>4</td>
</tr>
<tr>
<td>9. I write for punishment in high school.</td>
<td>12</td>
</tr>
<tr>
<td>10. My family asks about my writing at home.</td>
<td>5</td>
</tr>
<tr>
<td>11. My family reads my writing.</td>
<td>3</td>
</tr>
<tr>
<td>12. My family helps me with my writing.</td>
<td>1</td>
</tr>
<tr>
<td>13. I write in at least one of the community groups I belong to.</td>
<td>10</td>
</tr>
<tr>
<td>14. I write in church or Sunday School.</td>
<td>12</td>
</tr>
</tbody>
</table>
### Table II

Results of Keirsey Temperament Sorter

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<tr>
<td>M</td>
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</table>

1 2 3 4 5 6 7 8 9 10  
(Introversion)----------------(Extraversion)
Table III

(WAS)

10
9
8 *
7 *
6 *
5 *
4 *
3 *
2 *
1

1 2 3 4 5 6 7 8 9 10
(Introvert/Extravert)

Vertical = Writing Apprehension Scale
1 = writing apprehensive
10 = not writing apprehensive

Horizontal = Keirsey Temperament Sorter
1 = introversion
2 = extraversion