THE APPLICATION OF THE SENTENCE COMPLETION METHOD IN JUNIOR HIGH SCHOOLS IN TAIWAN

CHIEN-HOU HWANG

INTRODUCTION

Since the extension of the public education system in the Republic of China, guidance program in junior high schools has become an important part of the school activities and has made some achievement in last three years. Psychological tests which were infrequently used in high schools have also become routine instruments. In most of the schools, general ability tests are usually administered in the first year (or the seventh grade) while aptitude and personality tests are given in the second and third years (or the eighth and the ninth grade). It is an encouraging sign as far as the application of psychological tests is concerned; but it has also constituted a problem. In Taiwan today, the supply of tests is still far from being sufficient. There are several intelligence tests and two to three batteries of aptitude test. In the case of personality test, however, very little is available for adolescents of junior high school level. The demand of more suitable tests in that category is, therefore, very great.

Psychologists in this country have realized this demand, they are working hard in preparing more tests to answer the need of the community. At the same time, they are aware of the fact that in most schools, there is only one guidance worker who has some experiences in using tests while the enrollment of students is usually in thousands. In the occasion of test administration, assistance of all other regular teachers will be needed. They will be the examiners though they have had no training in using tests. The present author often feel that for school guidance program today, a test should fulfill the following criteria:

a. Easy to administer, preferrably group test.
b. Can be easily scored and analyzed.
c. The result can be understood and useful to regular teachers.

Having reviewed a large number of tests, the present author has found that the Sentence Completion method is one of the techniques that are suitable for the use in junior high schools in Taiwan. He has made a trial; the result of which is summerized in this report.
THE SENTENCE COMPLETION TECHNIQUE

A. Previous Studies of the Sentence Completion Method

The Sentence completion Technique is a rather simple method. The subject is given a set of sentence fragments or stems and he is asked to complete them into full sentences. This method is frequently used in language teaching programs. Psychologists first used this method in measuring intellectual capacities (Ebbinghaus, 1897; Kelly, 1917). In recent years, however, it has mainly used for personality assessment since the pioneer attempt of Payne (1928) and Tendler (1930).

Goldberg has made a very thorough review of Sentence Completion method in personality assessment. He pointed out that this method had been used in a great variety of researches: in studying attitudes toward some specific groups of people or certain objects; in predicting achievement for specialized groups; in studying differences between a wide variety of contrasted groups; in evaluating adjustment of various clinical groups (Goldberg, 1966).

Because of the great flexibility of the Sentence Completion method, each research often developed his own form of SCT to meet his specific clinical or research purpose. However, there have been attempts to develop standard SCT forms among which Sacks' Sacks Sentence Completion Test (SSCT) and Rotter's Incomplete Sentence Blank (ISB) are examples of two different approaches.

Sacks, in compiling his test forms, grouped his sentence stems into four clinically significant categories: Family, Sex, Interpersonal Relationships and Self Concept. These four areas are further divided into 15 sub-categories with four sentence stems in each of them (Sacks and Levy, 1950). This seems to be a very sound approach in which the responses of a subject can be readily classified. The information secured in this manner will fit the scheme that a researcher plans to collect. Meanwhile, with structured, content determining stems, it will be difficult for a subject to make evasive responses.

Rotter and his associates have chosen a different approach by using unstructured stems. They feel that there is no experimental evidence that structured stems would elicit more significant responses. On the contrary, well-structured stems often constitute threat to subjects. Their objective was to develop a group screening instrument that would provide a summary score of general psychological adjustment. With simple and general stems, Rotter's ISB has gained wide acceptance and has the most objective scoring system (Rotter and Rafferty, 1951).

B. The CSCT Used in the Present Study
The Chinese Sentence Completion Test (CSCT) used in the present study is a revision of Rotter's ISB. As the original stems are simple and short such as "I like....", "Most girls....", etc., there is little cultural factor involved in them; so the translation of the ISB can be used in Taiwan without any unhealthy effect. However, there are still two modifications: A. Two items ("The kind of person that I would like to be...." and "The test....") have been added and so there are 42 items altogether; B. The order of some of the items has been changed.

There is no time limit for CSCT; for junior high school students in Taiwan, the Test can be completed in 25-30 minutes. Most of the young people work on it with great ease, and usually have no difficulty to understand the instructions. During the administration of CSCT, two points are always emphasized: a. one should feel free to put down his true feelings, and b. there is no right or wrong answer to any of the stems. Subjects are also told that they may use phonetic symbols when they find difficulty to write a certain Chinese character. In actual administration of CSCT in the present study, the Test is given with a short form of Semantic Differential Test which takes about 15 minutes.

SUBJECTS OF THE PRESENT STUDY

Subjects included in the present study are 7th, 8th and 9th graders drawn from three junior high schools in Taipei area. One of the three schools has male students exclusively; the second is a girls school while the third is one of co-education. Over 500 students were tested. After the elimination of the incompleted ones, the records used for analysis numbered 449 the distribution of those subjects is given in Table 1.

<table>
<thead>
<tr>
<th>School</th>
<th>A Girls</th>
<th>B Girls</th>
<th>B Boys</th>
<th>C Boys</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st Year</td>
<td>33</td>
<td>40</td>
<td>27</td>
<td>37</td>
<td>137</td>
</tr>
<tr>
<td>2nd Year</td>
<td>40</td>
<td>39</td>
<td>42</td>
<td>35</td>
<td>156</td>
</tr>
<tr>
<td>3rd Year</td>
<td>38</td>
<td>38</td>
<td>42</td>
<td>38</td>
<td>156</td>
</tr>
<tr>
<td>Total</td>
<td>111</td>
<td>117</td>
<td>111</td>
<td>110</td>
<td>449</td>
</tr>
</tbody>
</table>

ANALYSIS OF THE RESULT

A. The Objective Scoring

One way of analysing the sentence completion records is the quantitative scoring method, to score each response according to a specific manual. There are several such
scoring systems, and the one developed by Rotter and Rafferty (1950) is often considered the most rigorous and objective one. According to their method, each response is scored on a 7-point scale from 0 to 6 for its degree of conflict. The principles of categorization are as follows:

P3—0 point: Responses which indicate a generalized positive feeling toward people, good social adjustment, healthy family life, optimism and humor.

P2—1 point: Responses with clear-cut good-natured humor, real optimism and warm acceptance.

P1 2 points: Responses which deal with positive attitude toward school hobbies, sports, expressions of warm feelings toward some individual, expressed interests in people and so on.

N 3 points: Neutral responses not falling clearly into either positive or conflict categories, generally on a simple descriptive level.

C1 4 points: Responses in which some kind of problems, difficulties, or complaints are expressed.

C2 5 points: Responses with expressions of inferiority, psychosomatic complaints, concern over possible failure or vocational choice, difficulty in interpersonal relationships, etc.

C3 6 points: Expressions of severe conflict or indications of maladjustments such as suicidal ideas, severe family problems, and strong negative attitudes toward people, and so on.

In addition, Rotter and Rafferty have provided a manual in which examples of responses in each category are given.

While Rotter’s principles of categorization are well formalized, his manual of scoring which is based on the responses made by American subjects is obviously not suitable for the use in Taiwan. The present author has to prepare a manual for scoring SCT responses from Chinese subjects. This is a very time-consuming task and the scoring manual for each sex has to be prepared separately. In doing so, 50 records were selected by random. The responses of those subjects to each item were carefully examined and classified into the above mentioned categories (P3-C3). The judgment was made on the meaning of a response as well as its frequency among the 50 records. Three judges worked on this and fully agreement of three was required to classify a response into a certain category. It took a long time to classify the responses to all 42 items. Some examples are given below:

To the stem “PEOPLE” (for female subjects)

P3—“......are very nice to me”, “......are all my good friends.”
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P2 "......are kind", "......are hard working", "......are happy and active".
P1 "......are rational animals", "......help each other", "......have ideals".
N "......should cooperate with one another", "......are born equal",
"......are members of the community".
C1 "......are realistic", "......are busy in their own business", "......are not always friendly".
C2 "......are stupid", "......are selfish", "......do not respect me".
C3 "......are cold-blood animals".

To the item "AT HOME" (for male subjects)

P3 "......I am very happy", "......it is very warm".
P2 "......I play with brothers and sisters", "......I'm a good boy".
P1 "......I help the house work", "......I can have a sound sleep", "......I can watch TV comfortably".
N "......I am the oldest child", "......I watch TV every night", "......I have a pet".
C1 "......it is not very interesting", "......I cannot relax myself".
C2 "......I often get ill", "......my parents are sometimes angry at me".
C3 "......I am always the scapegoat", "......I feel very lonely".

B. Data of the Present Study

1. Reliability

While all 449 CSCT records are scored by the author himself, 98 of them are also scored by a second scorer to determine the reliability of the test. The coefficient is found to be 0.82 which can be considered satisfactory as it falls within the range of the reliability coefficients (0.80-0.94) achieved by judges who used a scoring manual to assign responses to different categories (Rotter and Refferty, 1950).

2. Validity

The scores of CSCT have been validated against two other measures: (a) Eysenck's Maudzley Personality Inventory, neurotic scale; and (b) Teachers' ratings on general adjustment of students. The CSCT score has a correlation of 0.28 with the former. Although it is not very high, it still indicates a positive relationship. Since CSCT aims to measure general adjustment instead of neurotism alone, low correlation is probably what one should expect.

The CSCT score correlates even lower with Teachers' Ratings and the coefficient is 0.23. The Ratings made by the teachers are actually the sum of the ratings on ten sub-
scales of which the important ones are: Academic Achievement, Relationship with Peers, Relationships with teachers, Participation in Group activities, Diciplinary problems, and General Health Conditions.

When examined closely, academic achievement seems to be the key scale which has dominated the whole picture. Teachers tend to all other scales high when a subject is high in achievement scale, and when a subject has low achievement, all other scales will be rated low. The halo effect is very obvious. This generalization is not completely groundless, however. In high schools today, academic achievement does have effect on other aspects of one's life. Koh, in a study of under-achievers, finds that those students have poor adjustment in school (Koh, 1972). But there is still insufficient evidence to say that academic achievement means everything. When one realizes that teachers' ratings have been immensely influenced by students' grades, he would not be surprised to see the low correlation the CSCT has with them. Perhaps the best thing we can say now is that CSCT is measuring something different from what teachers are rating.

3. The Distribution of the CSCT Scores:

For the 449 students tested in the present study, the distribution of their CSCT scores is given in Table 2.

<table>
<thead>
<tr>
<th>Score</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>150-154</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>145-149</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>140-144</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>135-139</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>130-134</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>125-129</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>120-124</td>
<td>29</td>
<td>35</td>
</tr>
<tr>
<td>115-119</td>
<td>29</td>
<td>49</td>
</tr>
<tr>
<td>110-114</td>
<td>48</td>
<td>29</td>
</tr>
<tr>
<td>105-109</td>
<td>25</td>
<td>36</td>
</tr>
<tr>
<td>100-104</td>
<td>24</td>
<td>23</td>
</tr>
<tr>
<td>95-99</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>90-94</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>85-89</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Mean 116.55 115.50
S.D. 12.42 9.18
It is interesting to find that the mean scores of both sexes are very close to one another and they can be regarded as the normative data for girls and boys in junior schools in Taiwan today. However, the author has no intention at this moment to suggest a cutting score which can be used as a dividing line between adjustment and maladjustment. Further study is needed for the determination of such a cutting score.

C. The Impressionistic Approach

In contrast to the objective scoring, the handling of sentence completion material can also follow the impressionistic approach. This method is specially favored by clinical psychologists who feel that although a more “objective handling of the data sounds like a reasonable desire,” “...an effort in that direction at the present time would be premature;” and they believe that “more and better material can be acquired by a process of interpretation sentence by sentence until an acceptable global description is achieved” (Holopple and Miale, 1954). Stein (1947), Levy (1950), and Fover (1960) are the outstanding scholars that favor the non-quantitative interpretation of sentence completion material even though there is little empirical support for the impressionistic approach in content analysis.

In the present study, the author examines this problem from a rather practical viewpoint. Doubtlessly, there are many advantages in objective scoring. However, we see clearly that even with a manual, scoring of sentence completion records still requires good training because the manual provides only a few examples, and in many occasions, it is not easy to assign a response into a certain category. Besides, it takes a good deal of time to score a large number of records. For the use of sentence completion method in schools in Taiwan today, these are the matters that should be considered. While each school often has thousands of students, there is one guidance worker who may have some training in testing. Even if he can handle the scoring all by himself, other teachers would still have difficulty to understand what the score means. As Class Tutors are often invited to participate in many of the guidance activities, it would be a good idea to ask them to read the CSCT records and to pick out the significant responses. Being able to contribute more than just reading a score marked by somebody else, these Class Tutors may feel better and consequently may become more interested in test programs.

To test the feasibility of this idea, two Class Tutors in a girls school have been asked to examine 50 CSCT records and to select from each record these responses that might indicate adjustive problems. They seem to have done the job very satisfactorily. Though these responses are not "significant" from the view point of depth analysis, they are indications of emotional concerns. They are very useful in counseling because those are the problems that a subject is ready to admit and willing to cope with. Below are several examples:
A. Subject CF1321 Girl, 9th Grade, Total SCT score: 126

IN SCHOOL I am not an outstanding student.
WHAT PAINS ME is that on one in my family knows my trouble.
THIS TEST has made me aware of many problems.

Though her total score is not very high, the above mentioned responses suggest a state of general anxiety and inferiority feelings. Relations with family members also deserve special attention. A teacher or counselor can easily see the need to discuss these with the subject.

B. Subject CF1332 Girl 9th Grade Total CSCT score 132

THE BEST THING is to become taller and more beautiful, but not to gain any more weight.
I FEEL that I am short and fat.
I HATE that I cannot be taller and prettier.

For this girl, her great concern is very obvious. Surely she needs help in regard to the matter of weight control and to the development of healthy attitude toward one's physique. Development of self acceptance seems to be the goal of counseling.

C. Subject CF1352 Girl (9th Grade) Total CSCT score 136

A MOTHER is dead.
AT HOME, it is dull and lonely.
MY FATHER is dead.
IN SCHOOL, I act as if I were free from worry.

A teacher would naturally want to know more about the family of this subject; the latter's need of affection and support is obvious.

D. Subject CF1128 Girl 9th Grade Total CSCT score 124

THE BEST food is what my mother has prepared for me.
I SECRETLY put my present in mother's hand bag.
AT BEDTIME I always bid ‘Goon night’ to my mother.

Positive feelings among these response indicate a healthy relationship with mother. This certainly tells more than a single score. But one may also be interested to know her attitude toward father.
After having spotted these significant responses, the Tutors had interviews with those subjects and discussed with the latter the matters related to those responses. The discussions were held in friendly atmosphere in which the students expressed freely their fears and anxieties. With the support of the Tutor, those subjects could release their emotional tension and gain more insight about their problems. With the exception of three subjects who had to be referred to the Counselor, all others seemed to have been benefited by these discussions with the tutor. In a report, the Tutors later pointed out that (a) In most of the CSCT records, one can get some information which is not available in other resources in school files, (b) In general, the students are willing to discuss their problems that have been revealed in CSCT, and (c) the experiences are rewarding to both the Tutor and the students.

The present author has no intention to limit the use of CSCT to impressionistic approach, all he wants to point out is that in the present school situation, this method seems to have practical value and can be used along with the objective scoring.

SUGGESTIONS IN REGARD TO THE USE OF CSCT IN SCHOOLS

The present study has shown that Sentence Completion method can be used in Chinese junior high schools. This technique has many advantageous features among which the following points are of importance:

1. Most of the subjects are interested in taking the CSCT. They can see that it is not an ability test and consequently causes little “test anxiety”. Moreover, the CSCT gives students nearly complete freedom in making their responses, they can express their feelings in their own words. It is no surprise that over 75% of the subjects included in this study give Positive response to the item ‘THIS TEST’.

2. The CSCT can provide a good deal of information about the students so that teachers can understand them better. Although the present form has not arranged the stems in pre-arranged a categories, it is still easy for a teacher to see the general adjustment of a student.

3. The CSCT is easy to administer and the time for testing is relatively short. It does not cost much as the Test can be printed or mimeographed on one single sheet. Technically, it does not require much special training to give the test, regular teachers can handle its administration quite satisfactorily. In other words, the CSCT is a very economical technique in regard to the labor and finance required for its application in schools.

4. Sometimes school teachers show negative attitude toward the use of tests because
they know very little about those instruments. This will not be so in the case of the CSCT which looks so plain and so simple, and does not have any element of threat. As a result, most teachers would like the CSCT better than other tests.

Based on the findings of the present study, the author likes to make the following suggestions: concerning the application of the CSCT in junior high schools:

1. Both Objective Scoring and Impressionistic Approach can be adopted. As it has been mentioned before, objective scoring can provide an over-all index of general adjustment; but the scoring process does require some training. In schools where there are trained workers, the scoring can be done without difficulty. If, however, there is no trained personnel in the school or he is too busy to do all the scoring, the CSCT record can be treated by Impressionistic approach. By reading over a record, teachers can often identify those significant responses which indicate worries, anxieties, or unhealthy attitudes of a subject. These responses can be used as a starting point for discussion in individual counseling.

2. In ordinary school situation, it is not necessary to treat the CSCT material with depth analysis. The expressed conflicts in a record often provide sufficient information that is useful to a guidance worker. Generally, a teacher should not try to push too hard on a certain topic when the subject is not ready to discuss it. Besides, depth analysis is a task for clinical psychologists, not for teacher counselors.

3. Just like all psychological tests, the CSCT records should not be interpreted independently. On the contrary, the information obtained from the CSCT should be put together with those drawn from other resources to get a total picture of the general adjustment of a student. In the same token, no single response of the CSCT is to be examined separately. The general over-all atmosphere of a record is often more important. It is also advisable to evaluate a response against the normative data of the group to which a subject belongs.

4. The CSCT can be used as a means to investigate the social attitudes of a group. By analysing the CSCT records of a group, one can get some valuable material in regard to the central tendencies of the responses of its members. Such normative data will be very important reference in evaluating individual records. Furthermore, differences between groups can be determined. All these will be useful in school guidance programs.

**SUMMARY**

The purpose of the present research is to study the applicability of the sentence
The Application of the Sentence Completion Method in Junior High Schools in Taiwan

A Chinese Sentence Completion Test (CSCT) has been developed. The Test was used in three schools in Taipei area covering 449 students who are equally divided by sex. In adopting the Objective Scoring approach, a scoring manual based on the material collected in this study has been prepared. The Manual was used as a guide for assigning quantitative scores to responses made by the students. The interscorer reliability is found to be satisfactory (0.82). For validity study, the CSCT scores have positive correlations with the Neutoric Scale of the MPI and with Teachers Ratings on general adjustment; but with only moderate coefficients. The mean scores for boys and girls are comparable (115.50 and 116.55). Further study is needed to establish a cutting score for the discrimination of the well-adjusted and the maladjusted.

The Impressionistic approach of treating the CSCT material has also been tried in this study. Under the present circumstance, this non-quantitative method seems to have practical value in school guidance programs.

REFERENCES


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語句完成測驗在我國國民中學的可應用性

黃堅厚

摘要

本研究之目的在於探討語句完成測驗的技術是否可適應於我國國民中學的學生。為此進行此項研究，乃先編製一種語句完成測驗（簡稱 CSCT），並初步試用於台北地區三所國民中學的 4494 名學生（男女各半）。根據此項研究所得資料，並編好評分手冊，以作為評分時的參考。評分係採用客觀評分法，可對學生的每一反應加以量的評定。

本測驗的信度根據兩評分者評分結果之間的相關來決定，其信度係數達 0.82。在效度研究方面，則發現本測驗與 MPI 中的 Neurotic Scale，以及與教師對一般適應的評定分數之間，有正相關存在（0.28和0.23）。至於良好適應與不良適應的劃分點，則須繼續進一步研究，方能決定。

除客觀評分之外，本研究還採用非量性的印象法（impressionistic approach）來解釋學生的反應。在目前一般國中的輔導計劃現況下，非量性的方法似乎具有相當的實用價值。