

## Scoring Computer Attitude Questionnaire - CAQ 5.14

### Introduction

The Computer Attitude Questionnaire (CAQ v5.14) is a 65-item, 4-point Likert-type self-report questionnaire to be used with students in the fourth through eighth grades. The CAQ is designed to measure attitudes (feelings toward a person, or thing) and prevailing attitudes (dispositions), rather than achievement. Students record their own perceptions of the extent to which they agree or disagree with each item, under the supervision of a teacher in the classroom environment, or a parent in the home. The CAQ includes the seven YCCI separate indices/subscales (Computer Importance; Computer Enjoyment; Study Habits; Empathy; Motivation/Persistence; Creative Tendencies and School) plus a subscale for Anxiety. The CAQ also includes the three paired-comparison sets from the YCCI (v5.14). The following sections describe how to score each subscale.

### YCCI(v5.14) Subscales

The seven subscales from the YCCI (v5.14) are  
Computer Importance (I);  
Computer Enjoyment (J);  
Study Habits (S);  
Empathy (E);  
Motivation/Persistence (M);  
Creative Tendencies (C);  
and School (SC).

For the CAQ (v5.14) an eight subscale Anxiety has been added. The items of the subscales are distributed among the parts of the CAQ(v5.14) as follows:

<b>Subscale</b>	<b>Part</b>	<b>Item Numbers</b>
Computer Importance (I)	1	3, 6, 7, 8, 9, 10, 11
Computer Enjoyment (J)	1	1, 2, 4, 5, 9, 12, 13, 16, 19
Study Habits (S)	2	21, 24, 25, 26, 29, 30, 31, 32, 33, 34,
Motivation/Persistence (M)	2	21, 22, 23, 25, 27, 28, 29, 34
Empathy (E)	3	36, 37, 38, 39, 40, 41, 42, 43, 44, 45
Creative Tendencies (C)	4	46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58
School (SC)	6	62, 63, 64, 65
Anxiety	1	12, 13, 14, 15, 16, 17, 18, 19

### Step-by Step Scoring Procedures:

The recommended CAQ scoring procedure is to simply sum the numeric values of the responses for the related items to produce seven subscale scores. However, ten items on the CAQ have negative wording and must be reversed before adding to the others. These items are numbered 2, 13, 14, 16, 17, 18, 19, 20, 63, and 65. One simple way is to use a colored pen to circle the reflected values of the numbers marked by the students for these eight items. If the student circled 1, make it 4; if a student circled 3, make it 2. For example, Computer Enjoyment will be the sum of nine items (1, 2, 4, 5, 9, 12, 13, 16, and 19), with items 2, 13, 16, and 19 reversed before inclusion in the sum. To generate an average for each subscale, take the sum of the items and divide by the number of items.

### **1. Reverse the items negatively worded within each subscale**

Ten items in the CAQ subscales have negative wording. These items are (2), (13), (14), (16), (17), (18), (19), (20), (63), and (65); the variables are var2, var13, var14, var16, var17, var18, var19, var20, var78, and var80.

To ensure that this alternate positioning does not skew scores, the scoring process must include reversal of items negatively worded.

SPSS command example:

```
compute varx = 5 - varx.
```

(where  $x$  is the variable that represents the item in the scale and where 5 is used for any 4-position scale)

SPSS command application:

```
compute var2 = 5 - var2.  
compute var13 = 5 - var13.  
compute var14 = 5 - var14.  
compute var16 = 5 - var16.  
compute var17 = 5 - var17.  
compute var18 = 5 - var18.  
compute var19 = 5 - var19.  
compute var20 = 5 - var20.  
compute var78 = 5 - var78.  
compute var80 = 5 - var80.
```

```
missing values var2 var13 var14 var16 var17 var18 var19 var20  
var78 var80 (5).
```

### **2. Generate an average score for each subscale**

For each subscale, add all responses and divide by the number of items.

SPSS command example:

compute J = (var1+var2+ var4+ ...+varn)/n.

SPSS command application:

```
compute I = (var3+var6+var7+var8+var9+var10+var11)/7.  
compute J = (var1+var2+var4+var5+var9+var12+var13+var16+var19)/9.  
compute M = (var21+var22+var23+var25+var27+var28+var29  
+var34+var35)/9.  
compute S = (var21+var24+var25+var26+var29+var30+var31+var32  
+var33+var34)/10.  
compute E = (var36+var37+var38+var39+var40+var41+var42+var43  
+var44+var45)/10.  
compute C = (var46+var47+var48+var49+var50+var51+var52+var53  
+var54+var55+var56+var57+var58)/13.  
compute SC = (var77+var78+var79+var80)/4.  
compute Anxiety = (var12+var13+var14+var15+var16+var17+var18+var19)/8.
```

### Paired Comparisons Scoring

This scale has three sub-sections to measure "preference for", "difficulty level of" and "learn most from" of 6 activity paired-comparisons. The respondent chooses between the two activities. Step-by-step procedures for scoring this scale are:

#### Step-by Step Scoring Procedures:

##### 1. Generate an SPSS command

SPSS command application:

```
compute pread = 0.  
IF (var59 ge 1) pread=sum(pread,1).  
IF (VAR62 eq 2) PREAD = sum(pread, 1).  
IF (VAR63 eq 1) PREAD = sum(pread, 1).  
  
compute PWRITE = 0.  
IF (VAR59 EQ 2) PWRITE = sum(PWRITE,1).  
IF (VAR60 EQ 1) PWRITE = sum(PWRITE,1).  
IF (VAR64 EQ 1) PWRITE = sum(PWRITE,1).  
compute PTV = 0.  
IF (VAR60 EQ 2) PTV = sum(PTV,1).  
IF (VAR61 EQ 1) PTV = sum(PTV,1).  
IF (VAR63 EQ 2) PTV = sum(PTV,1).  
compute PCOMP = 0.  
IF (VAR61 EQ 2) PCOMP = sum(PCOMP,1).  
IF (VAR62 EQ 1) PCOMP = sum(PCOMP,1).  
IF (VAR64 EQ 2) PCOMP = sum(PCOMP,1).  
compute DREAD = 0.  
IF (VAR65 EQ 1) DREAD = sum(DREAD,1).  
IF (VAR68 EQ 2) DREAD = sum(DREAD,1).  
IF (VAR69 EQ 1) DREAD = sum(DREAD,1).  
compute DWRITE = 0.
```

```
IF (VAR65 EQ 2) DWRITE = sum(DWRITE,1) .
IF (VAR66 EQ 1) DWRITE = sum(DWRITE,1) .
IF (VAR70 EQ 1) DWRITE = sum(DWRITE,1) .
compute DTV = 0.
IF (VAR66 EQ 2) DTV = sum(DTV,1) .
IF (VAR67 EQ 1) DTV = sum(DTV,1) .
IF (VAR69 EQ 2) DTV = sum(DTV,1) .
compute DCOMP = 0.
IF (VAR67 EQ 2) DCOMP = sum(DCOMP,1) .
IF (VAR68 EQ 1) DCOMP = sum(DCOMP,1) .
IF (VAR70 EQ 2) DCOMP = sum(DCOMP,1) .
compute LREAD = 0.
IF (VAR71 EQ 1) LREAD = sum(LREAD,1) .
IF (VAR74 EQ 2) LREAD = sum(LREAD,1) .
IF (VAR75 EQ 1) LREAD = sum(LREAD,1) .
compute LWRITE = 0.
IF (VAR71 EQ 2) LWRITE =sum(LWRITE,1) .
IF (VAR72 EQ 1) LWRITE =sum(LWRITE,1) .
IF (VAR76 EQ 1) LWRITE =sum(LWRITE,1) .
compute LTV = 0.
IF (VAR72 EQ 2) LTV = sum(LTV,1) .
IF (VAR73 EQ 1) LTV = sum(LTV,1) .
IF (VAR75 EQ 2) LTV = sum(LTV,1) .
compute LCOMP = 0.
IF (VAR73 EQ 2) LCOMP = sum(LCOMP,1) .
IF (VAR74 EQ 1) LCOMP = sum(LCOMP,1) .
IF (VAR76 EQ 2) LCOMP = sum(LCOMP,1) .
```