

Psychometric Evaluation of the CSUQ Using Data from Five Years of Usability Studies

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Abstract

Factor analysis of Computer System Usability Questionnaire (CSUQ) data from five years of usability studies (with a heavy emphasis on speech dictation systems) indicated a three-factor structure consistent with that described ten years ago: a factor for System Usefulness (SysUse), Information Quality (InfoQual), and Interface Quality (IntQual). Estimated reliabilities (ranging from .83 to .96) were also consistent with earlier estimates. Analyses of variance indicated that variables such as the study, developer, stage of development, type of product and type of evaluation significantly affected CSUQ scores. Other variables, such as gender and completeness of responses to the questionnaire, did not.

ITIRC Keywords

Post-Study System Usability Questionnaire

Computer System Usability Questionnaire

PSSUQ

CSUQ

Usability measurement

Speech dictation systems

Psychometric evaluation

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Introduction

Background

The Computer System Usability Questionnaire (CSUQ) is a 19-item instrument designed for the purpose of assessing users' perceived satisfaction with their computer systems. It has its origin in an internal IBM project called SUMS (System Usability MetricS), headed by Suzanne Henry in the late 1980s. The mission of SUMS was to document and validate procedures for measuring system usability, including performance, usability problems and user satisfaction.

At that time, there were a few efforts worldwide to develop instruments for the measurement of user satisfaction with system usability. In particular, the QUIS at the University of Maryland (Chin, Diehl, & Norman, 1988) and the CUSI at the University College of Cork in Ireland (Kirakowski & Dillon, 1988) have had a significant influence on usability engineering practices. At the time we were working on SUMS, though, we did not know about these projects, so we set about developing our own standardized usability questionnaire. A team of IBM human factors and usability specialists working on SUMS created a pool of items hypothesized to relate to usability, and from those items we selected 18 to use systematically in usability evaluations as an end-of-study questionnaire. We named the questionnaire the Post-Study System Usability Questionnaire (PSSUQ).

In a separate unpublished study of customer perception of usability, a series of investigations using decision support systems revealed a common set of five system characteristics associated with usability by several different user groups (Doug Antonelli, personal communication, January 5, 1991). The original 18-item PSSUQ addressed four of these five system characteristics, but did not address ease of learning. We subsequently added an item to the PSSUQ to address this system characteristic, producing the current version with 19 items (see Appendix A).

Previous Psychometric Evaluations

Previous psychometric evaluations (Lewis, 1991, 1992a, 1992b, 1995) indicated that the PSSUQ and CSUQ (a questionnaire identical to the PSSUQ except for slightly revised wording of the items to make them appropriate for field work¹) produced a reliable overall composite score and had three reliable factors. The labels assigned to these factors were System Usefulness (SysUse), Information Quality (InfoQual), and Interface Quality (IntQual).

Investigations into scale validity found that the overall score correlated highly with other measures of user satisfaction taken after each scenario, and the overall score, SysUse, and IntQual all correlated significantly with the percentage of successful scenario completion. Sensitivity analyses have determined that the scales respond appropriately to manipulations of system and user groups.

Purpose of the Current Evaluation

The purpose of the current evaluation was to investigate the psychometric characteristics of the CSUQ (lab version) using data from five years of usability evaluation in our lab. At the time we

¹ Over the years we have used the questionnaires, the original distinction between the PSSUQ and CSUQ has become blurred. Our current terminology is to refer to the questionnaire as the CSUQ. We discriminate between the two forms (when necessary) by referring to them as the lab version and the field version.

originally designed the questionnaire, the emphasis was on enterprise-wide and networked office application suites (Lewis, Henry, & Mack, 1990). Our emphasis over the last five years has been on the evaluation of speech recognition systems (with a primary focus on speech dictation). The primary question was whether the instrument would exhibit a factor structure, reliability, and sensitivity consistent with previous research.

Method

The data analyzed in this report came from 21 different unpublished usability studies in which participants completed the CSUQ. Most of the studies were investigations of speech recognition systems (IBM and non-IBM systems), with an emphasis on speech dictation (both discrete and continuous). The other studies were investigations of a personal communicator (cellular telephone with additional PDA functions) and a handwriting capture device. The CSUQ database created from the questionnaires completed for this study had 210 entries from participants of widely varying backgrounds, computer experience, and age. The data (both questionnaire responses and fundamental characteristics of the studies) are available in Appendix B.

Results

Factor Analysis

Figure 1 shows the scree plot from a factor analysis of the data. A discontinuity analysis (Coovert & McNelis, 1988) indicated a three-factor solution. Figure 1 shows the scree plot of the eigenvalues from the analysis. Table 1 shows the varimax-rotated three-factor solution. The three-factor solution explained 72.5% of the variance in the data.

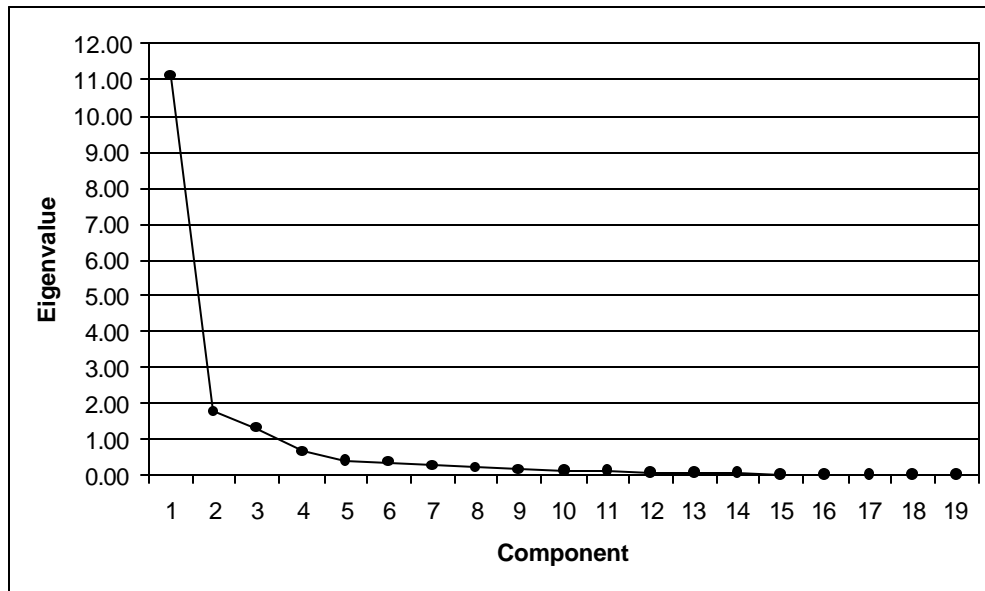


Figure 1. Scree Plot from Factor Analysis

Table 1. Varimax-Rotated Three-Factor Solution

Item	Factor 1	Factor 2	Factor 3
Q1	0.83	0.38	0.23
Q2	0.62	0.46	0.20
Q3	0.79	0.35	0.17
Q4	0.82	0.25	0.22
Q5	0.82	0.26	0.32
Q6	0.73	0.40	0.20
Q7	0.47	0.45	0.38
Q8	0.73	0.19	0.29
Q9	0.32	0.60	0.13
Q10	0.59	0.56	0.14
Q11	0.24	0.89	0.21
Q12	0.28	0.83	0.15
Q13	0.32	0.81	0.13
Q14	0.36	0.79	0.21
Q15	0.15	0.51	0.47
Q16	0.20	0.19	0.86
Q17	0.36	0.10	0.86
Q18	0.38	0.27	0.54
Q19	0.76	0.27	0.37

The factor structure is very similar to the structure previously reported for the PSSUQ and CSUQ (Lewis, 1995), with a few exceptions. In this analysis, the 19th item loaded strongly on the first factor (SysUse), whereas in the past it loaded about equally on the first and third factors (SysUse and IntQual). Items 7 and 10 loaded about equally on the first and second factors (SysUse and InfoQual). In the previous evaluations Item 7 loaded most strongly on SysUse and Item 10 loaded most strongly on InfoQual. For purposes of the following evaluations, SysUse includes all of its former items (1-8), plus the 19th item. For continuity, I resolved the ambiguities in the factor analysis in favor of the existing CSUQ scale structure (Items 9-15 for InfoQual; Items 16-18 for IntQual).

Reliability

Estimates of reliability using coefficient alpha indicated levels of reliability for the overall CSUQ and its factors that were consistent with previous estimates (shown in Table 2 -- values for PSSUQ and CSUQ are available in Lewis, 1995). All the reliabilities exceeded .70, indicating that they have sufficient reliability to be valuable as usability measurements (Landauer, 1988).

Table 2. Present and Past Estimates of Reliability for CSUQ Scales

Study	All	SysUse	InfoQual	IntQual
<i>Current</i>	0.96	0.96	0.92	0.83
<i>PSSUQ</i>	0.97	0.96	0.91	0.91
<i>CSUQ</i>	0.95	0.93	0.91	0.89

Sensitivity

Analyses of variance conducted to investigate the sensitivity of CSUQ measures to various manipulations indicated that the following variables significantly affected CSUQ scores (main effect, interaction with CSUQ factors, or both):

- Study (21 levels)
- Developer (4 levels)
- Stage of development (2 levels)
- Type of product (5 levels)
- Type of evaluation (2 levels)

The following variables did not significantly affect CSUQ scores:

- Gender (2 levels)
- Completeness of responses to questionnaire (2 levels)

The detail for each of the analyses follows. The structure of data in the database permitted only an evaluation of individual main effects and interactions of those individual main effects with CSUQ factor. For every evaluation, the main effect of CSUQ factor was highly significant (p ranging from .001 to .0000000000000003). The mean values of the CSUQ factors were 2.8 for SysUse, 3.0 for InfoQual, and 2.5 for IntQual (with 2.8 for both the composite score collapsed across all 19 items and the mean of the factor scores). In all analyses, lower scores indicate better ratings.

Study. Both the main effect ($F(20,184) = 2.2, p = .004$) and the interaction ($F(40,368) = 3.2, p = .000000003$) were significant, with the effects appearing in Tables 3-4 and Figures 2-3.

Table 3. Main Effect of Study

Study	Code	Mean
CNDS	A	2.6
BENCHM	B	3.6
ACCENT	C	3.1
MSD	D	2.3
DICTDV	E	4.2
COMP98	F	2.7
DISCB	G	2.6
DISCK	H	3.3
DOCKBAR	I	2.1
CONT97	J	2.3
DISCD2	K	3.2
DISCD1	L	3.9
DISCA	M	2.7
XPAD2	N	2.3
PC	O	1.9
DISCSS	P	2.3
DISCSSG	Q	2.3
GAMER	R	2.5
CONT98	S	3.4
CONT99	T	3.6
PROOF	U	3.6

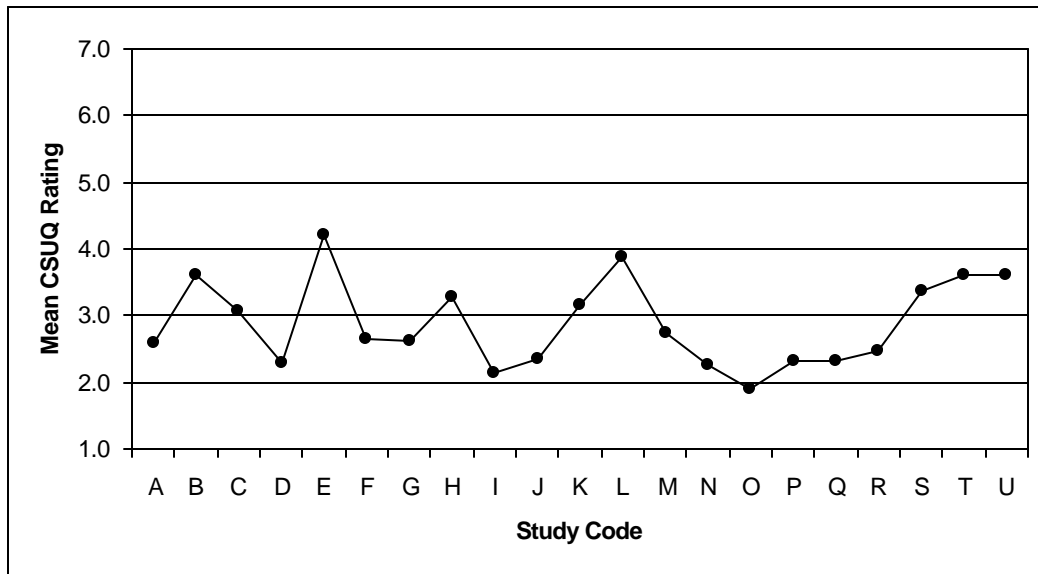


Figure 2. Main Effect of Study

Table 4. Study by Factor Interaction

Study	Code	SysUse	InfoQual	IntQual
CNDS	A	2.6	2.6	2.5
BENCHM	B	3.5	4.5	1.8
ACCENT	C	3.1	3.3	3.1
MSD	D	2.3	2.5	1.9
DICTDV	E	4.8	3.5	3.6
COMP98	F	2.6	2.8	2.4
DISCB	G	2.6	3.1	2.1
DISCK	H	3.3	3.4	2.8
DOCKBAR	I	1.7	3.0	1.7
CONT97	J	2.3	2.5	2.3
DISCD2	K	3.4	2.7	2.8
DISCD1	L	4.4	3.4	3.1
DISCA	M	2.7	2.8	2.6
XPAD2	N	2.0	2.7	1.9
PC	O	1.6	2.4	1.6
DISCSS	P	2.1	2.4	2.8
DISCSSG	Q	2.1	2.6	2.4
GAMER	R	2.4	2.7	2.0
CONT98	S	3.2	3.9	3.0
CONT99	T	3.5	4.5	1.8
PROOF	U	4.0	3.4	2.8

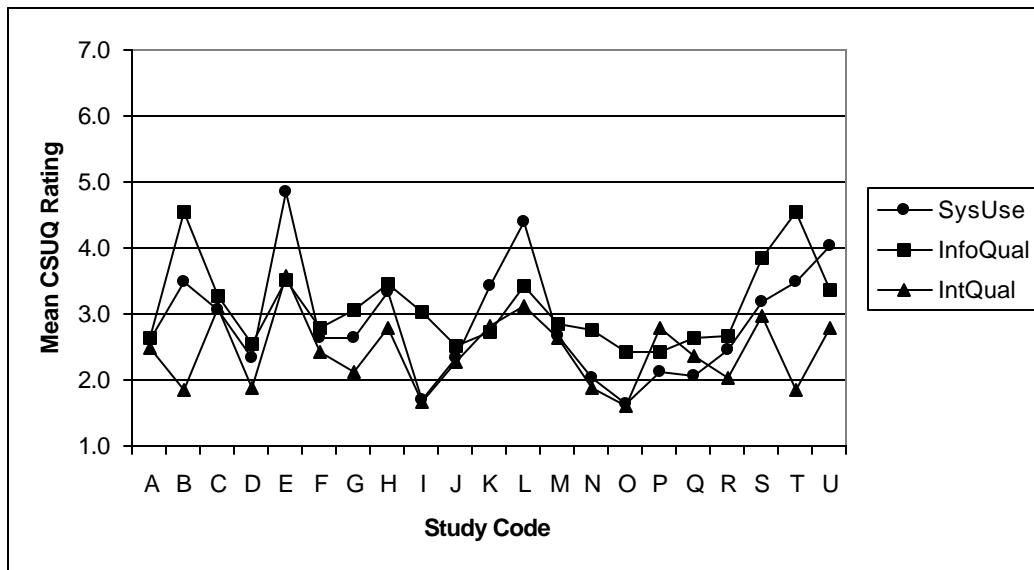


Figure 3. Study by Factor Interaction

Developer. This variable refers to the company that developed the product that was under study. Both the main effect ($F(3,201) = 3.4, p = .02$) and the interaction ($F(6,402) = 3.6, p = .002$) were significant, with the effects appearing in Tables 5-6 and Figures 4-5.

Table 5. Main Effect of Developer

Developer	Mean
<i>CIC</i>	2.7
<i>CDC</i>	3.3
<i>CKC</i>	3.2
<i>CMC</i>	2.5

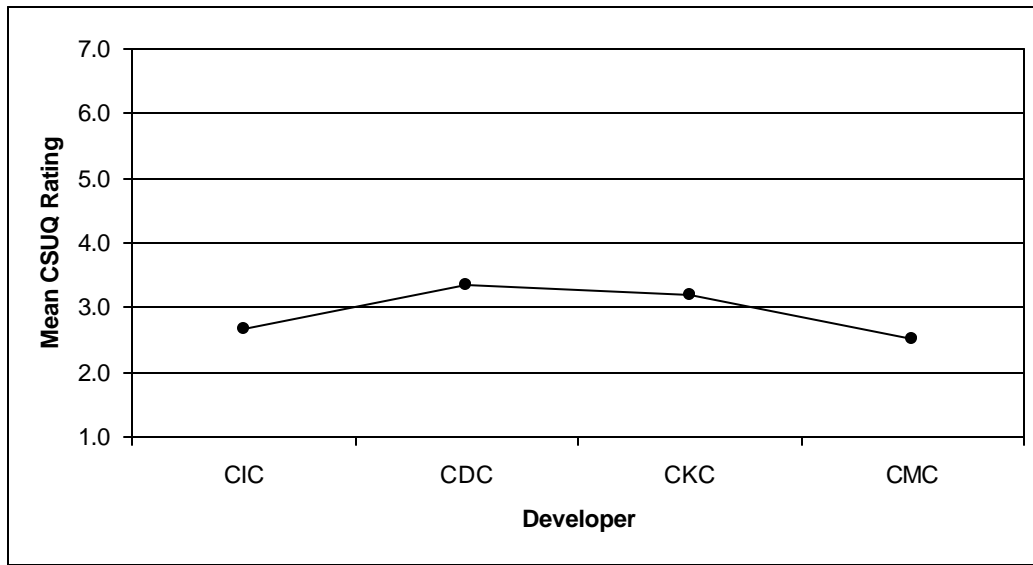


Figure 4. Main Effect of Developer

Table 6. Developer by Factor Interaction

Developer	SysUse	InfoQual	IntQual
<i>CIC</i>	2.6	3.0	2.4
<i>CDC</i>	3.8	3.2	2.9
<i>CKC</i>	3.3	3.4	2.8
<i>CMC</i>	2.8	2.7	2.1

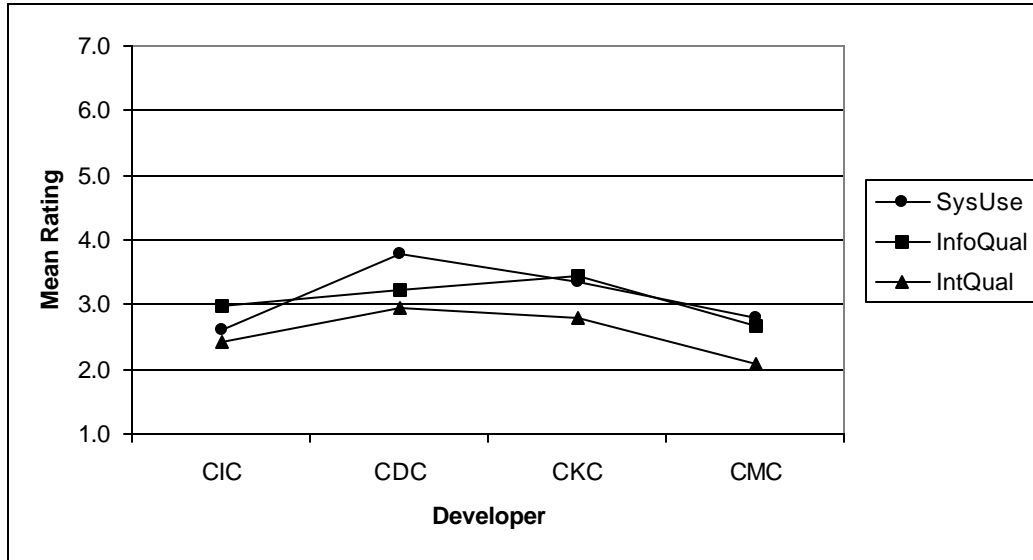


Figure 5. Developer by Factor Interaction

Stage of development. This variable refers to whether the investigated product was in development or available for purchase. Both the main effect ($F(1,203) = 4.2, p = .04$) and the interaction ($F(2,206) = 3.1, p = .05$) were significant, with the effects appearing in Tables 7-8 and Figures 6-7.

Table 7. Main Effect of Development Stage

Stage	Mean
Development	2.6
Product	3.0

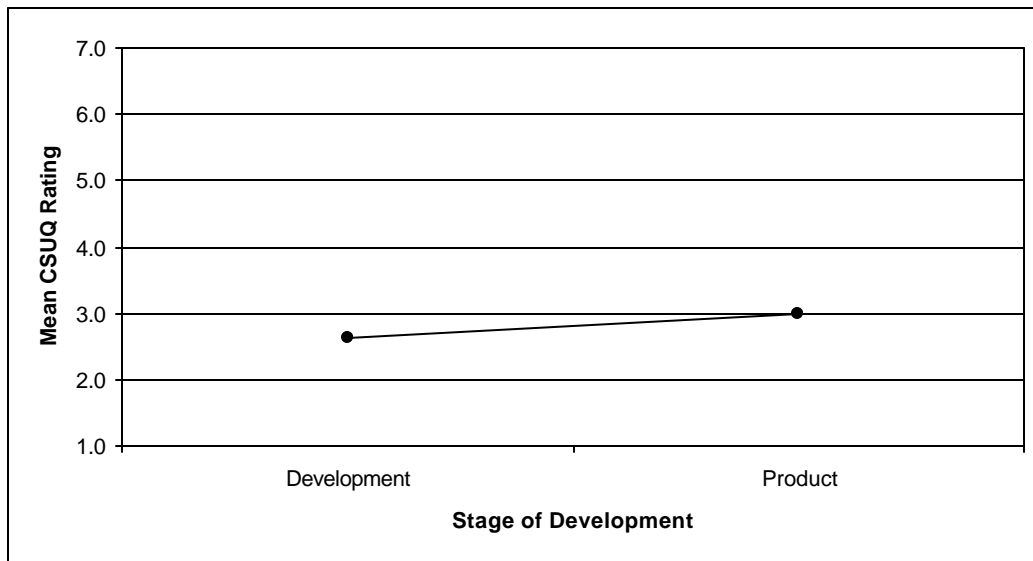


Figure 6. Main Effect of Development Stage

Table 8. Development Stage by Factor Interaction

Stage	SysUse	InfoQual	IntQual
Development	2.6	2.9	2.4
Product	3.1	3.2	2.6

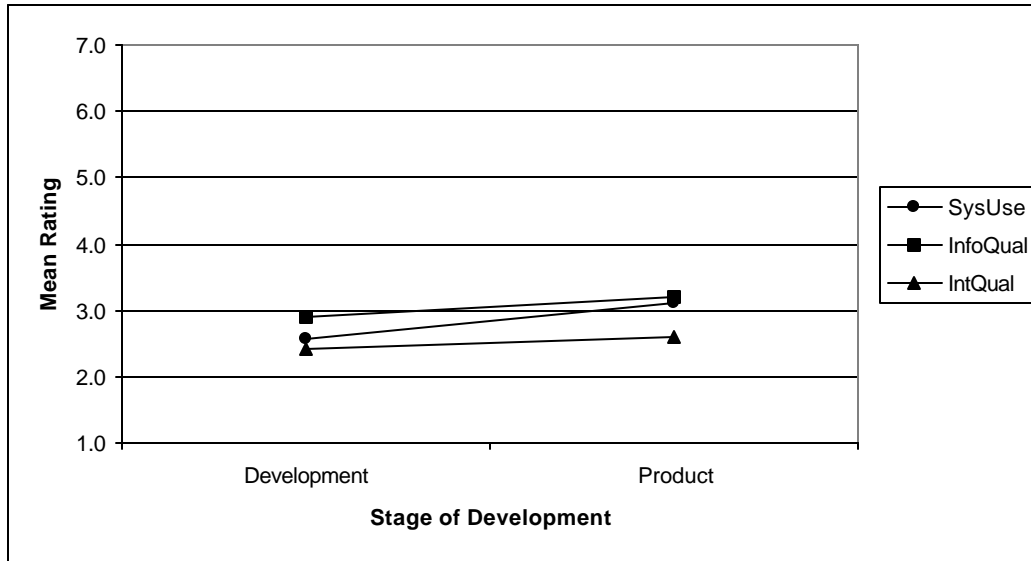


Figure 7. Development Stage by Factor Interaction

Type of product. This variable refers to the type of product under investigation. "Continuous" refers to continuous dictation products, "Discrete" to discrete dictation products, "Game" to a product for speech control of computer games, "PersComm" to a personal communicator, and "Pen" to a handwriting capture device. The main effect ($F(4,200) = 1.9, p = .11$) was not significant, but the interaction ($F(8,400) = 2.3, p = .02$) was, with the effects appearing in Tables 9-10 and Figures 8-9.

Table 9. Main Effect of Product Type

Product Type	Mean
Continuous	2.8
Discrete	2.9
Game	2.4
PersComm	2.2
Pen	1.9

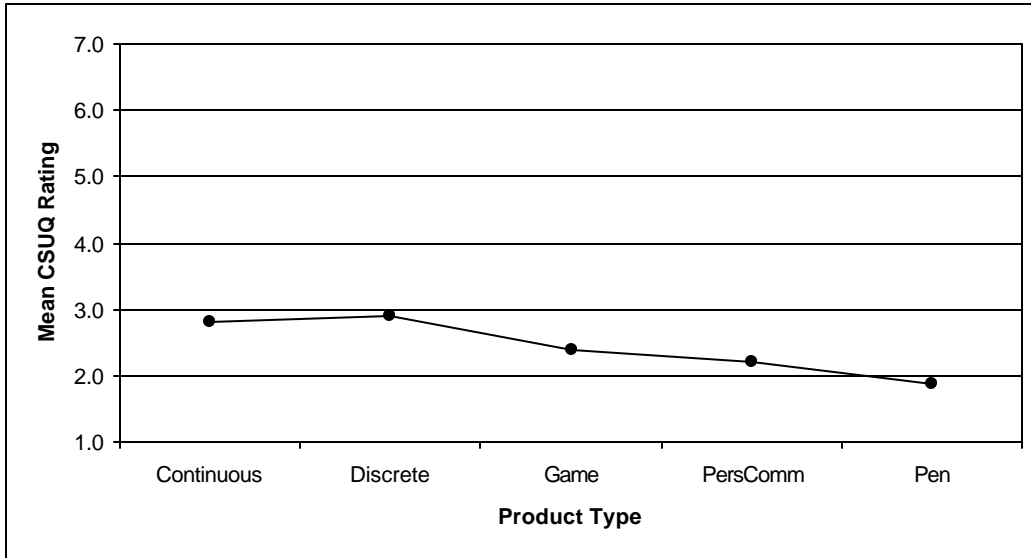


Figure 8. Main Effect of Product Type

Table 10. Product Type by Factor Interaction

Product Type	SysUse	InfoQual	IntQual
Continuous	2.9	2.9	2.6
Discrete	2.9	3.3	2.5
Game	2.4	2.7	2.0
PersComm	2.0	2.7	1.9
Pen	1.6	2.4	1.6

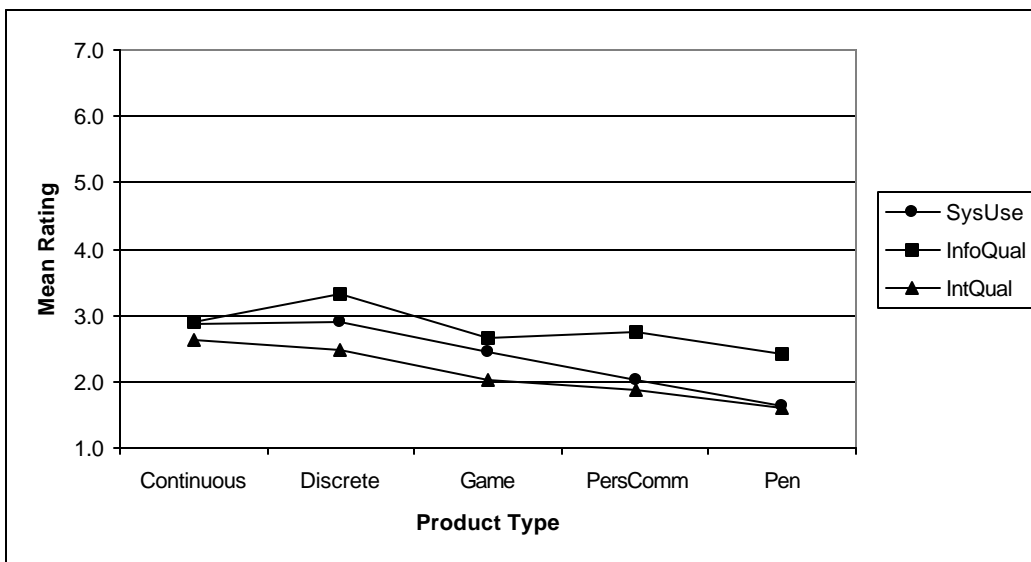


Figure 9. Product Type by Factor Interaction

Type of evaluation. This variable refers to the type of evaluation conducted in the study. "Dictation" refers to the use of a specific protocol for the measurement of dictation speed and accuracy (Lewis, 1997, 1999). "Standard" refers to the use of a standard scenario-based usability problem discovery protocol. The main effect ($F(1,203) = .004, p = .99$) was not significant, but the interaction ($F(2,406) = 7.6, p = .001$) was, with the effects appearing in Tables 11-12 and Figures 10-11.

Table 11. Main Effect of Evaluation Type

Evaluation Type	Mean
<i>Dictation</i>	2.8
<i>Standard</i>	2.8

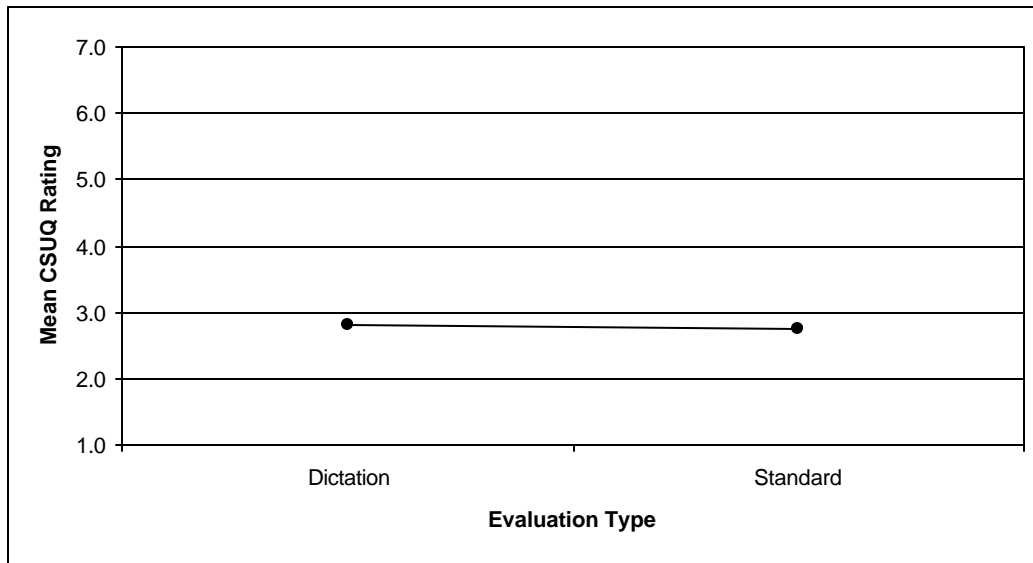


Figure 10. Main Effect of Evaluation Type

Table 12. Evaluation Type by Factor Interaction

Evaluation Type	SysUse	InfoQual	IntQual
<i>Dictation</i>	2.9	2.9	2.6
<i>Standard</i>	2.7	3.2	2.4

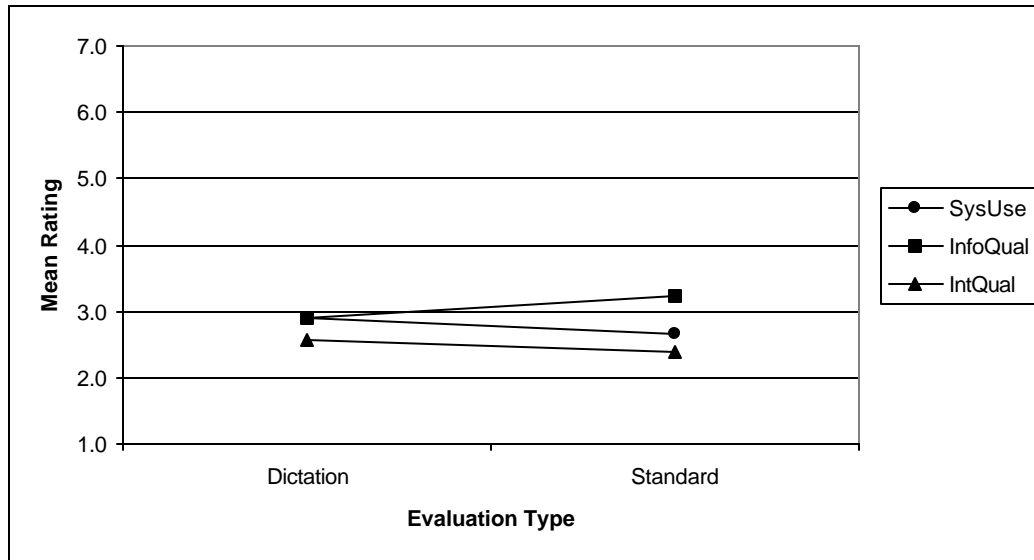


Figure 11. Evaluation Type by Factor Interaction

Gender. Neither the main effect ($F(1,194) = .12, p = .74$) nor the interaction ($F(2,388) = 1.8, p = .17$) were significant. The effects appear in Tables 13-14 and Figures 12-13.

Table 13. Main Effect of Gender

Gender	Mean
Female	2.7
Male	2.7

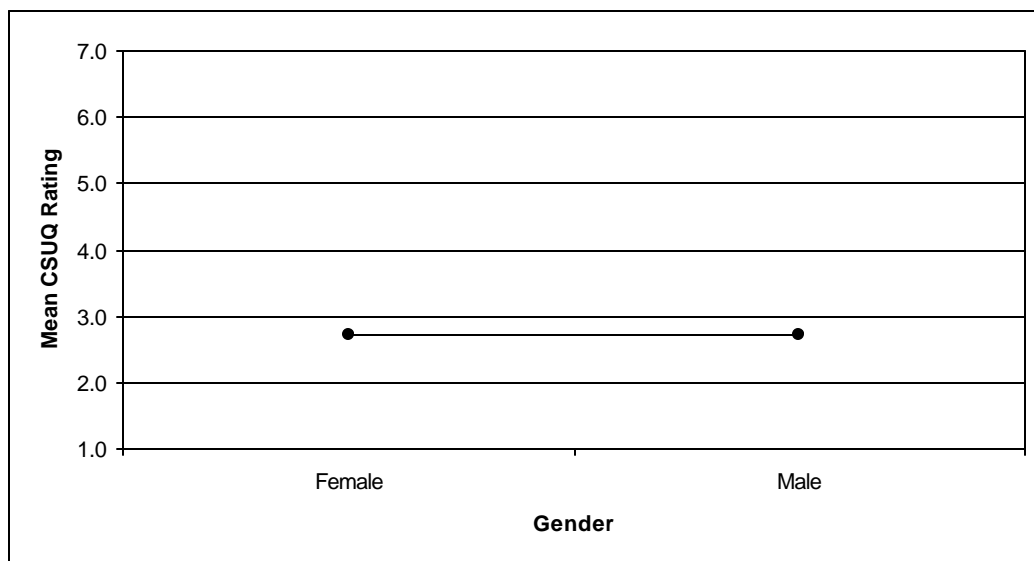


Figure 12. Main Effect of Gender

Table 14. Gender by Factor Interaction

Gender	SysUse	InfoQual	IntQual
Female	2.7	3.0	2.5
Male	2.8	2.9	2.5

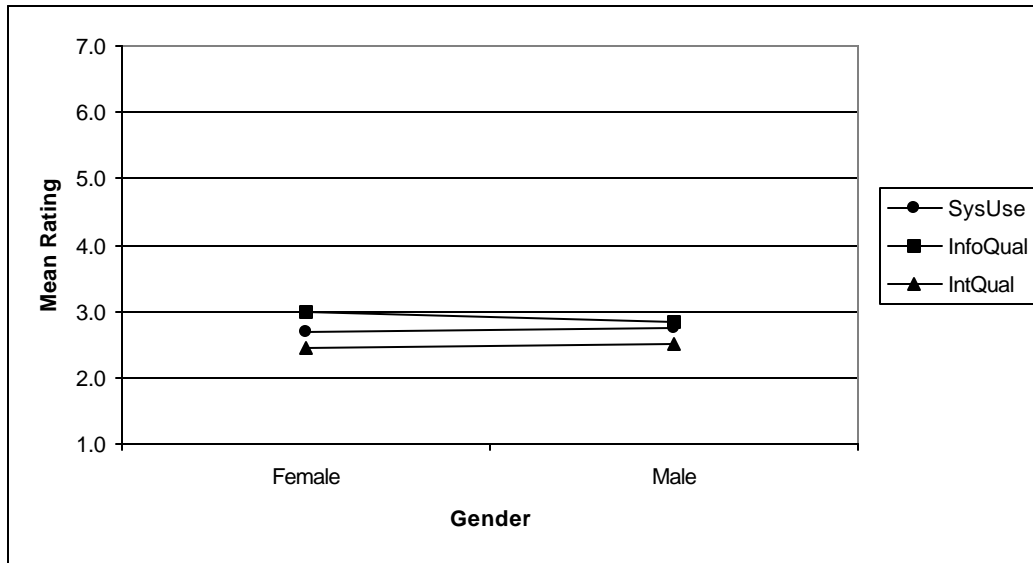


Figure 13. Gender by Factor Interaction

Completeness of responses to questionnaire. Neither the main effect ($F(1,203) = .26, p = .61$) nor the interaction ($F(2,406) = 1.3, p = .28$) were significant. The effects appear in Tables 15-16 and Figures 14-15.

Table 15. Main Effect of Completeness

Completeness	Mean
Complete	2.8
Incomplete	2.8

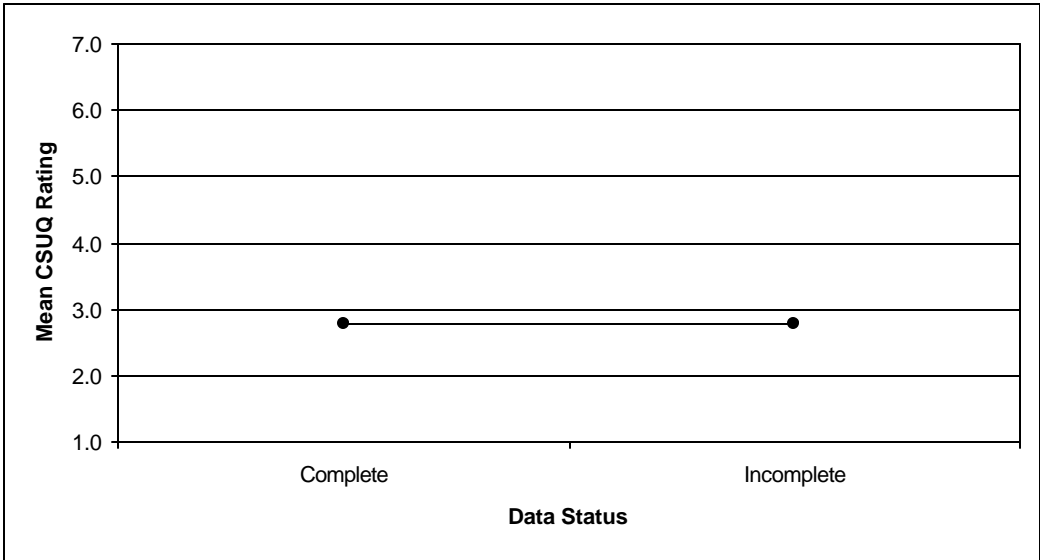


Figure 14. Main Effect of Completeness

Table 16. Completeness by Factor Interaction

Completeness	SysUse	InfoQual	IntQual
Complete	2.8	3.0	2.5
Incomplete	2.7	3.1	2.5

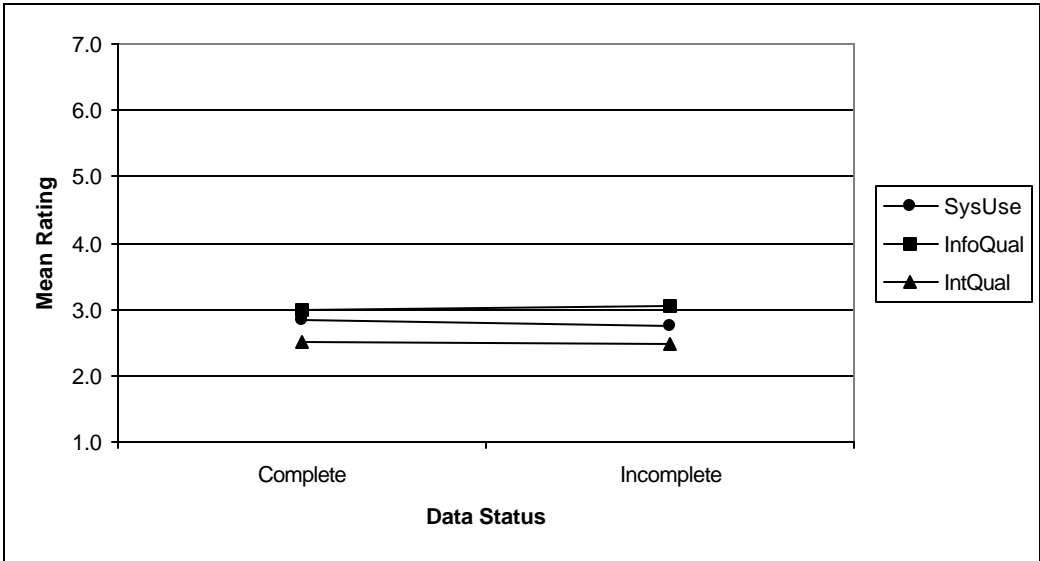


Figure 15. Completeness by Factor Interaction

Discussion

Following are the key findings from these analyses and associated discussion:

Results were Consistent with Previous Research

Even though the data used in this analysis came from studies that differed in both content and protocol from the studies that generated the data for previous analyses, the factor structure, scale reliabilities, and sensitivity analyses were all consistent with the results reported in previous research (Lewis, 1995). The reliability of IntQual has been the most variable across studies, possibly because it has the fewest (only three) items. In summary, the analyses support the continued use of the CSUQ and its historical factors as a measure of user perception of and satisfaction with product usability in scenario-based usability evaluations.

Ratings of Commercially Available Products Tended to be Worse than Products Under Development

This was a somewhat surprising result. It might be due to a number of factors. For example, when evaluating a product under development, the range of tasks that the product can perform is more limited than will be the case once the product is complete. This affects the number (and possibly the complexity) of tasks that an evaluator can ask participants to perform with the product. Also, when a product is under development, the documentation for the product is often not available for the evaluation, so the test monitor plays a greater role in providing help to participants when necessary. As shown in Figure 7, the primary difference between products under development and those commercially available was slightly less satisfaction with the quality of the information provided by the commercially available products.

The CSUQ Ratings Tended to be Robust Even When Questionnaires were Incomplete

Based on psychometric theory, I had hypothesized in earlier papers that the failure to complete all items in the questionnaire should not invalidate the responses or the gathering of the available responses into scales by averaging across the available items (Lewis, 1995). The basis for this hypothesis was that scale reliability is a function of the interrelatedness of scale items, the number of scale steps per item, and the number of items in a scale (Nunnally, 1978). If a participant chooses not to answer an item, the effect should be to reduce slightly the reliability of the scale in that instance and, in most cases, the remaining items should offer a reasonable estimate of the appropriate scale score. The nonsignificant main effect and interaction for the Completeness variable (Figures 14 and 15) supported this hypothesis and, by extension, our current practice of computing scale scores from CSUQs that participants have not fully completed.

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Appendix A. The CSUQ

Computer System Usability Questionnaire (Lab Version)

Participant: _____

System: _____

This questionnaire (which starts on the following page), gives you an opportunity to tell us your reactions to the system you used. Your responses will help us understand what aspects of the system you are particularly concerned about and the aspects that satisfy you.

To as great a degree as possible, think about all the tasks that you have done with the system while you answer these questions.

Please read each statement and indicate how strongly you agree or disagree with the statement by circling a number on the scale. If a statement does not apply to you, circle N/A.

Please write comments to elaborate on your answers.

As you complete the questionnaire, please do not hesitate to ask any questions.

Thank you!

1. Overall, I am satisfied with how easy it is to use this system.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

2. It was simple to use this system.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

3. I could effectively complete the tasks and scenarios using this system.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

4. I was able to complete the tasks and scenarios quickly using this system.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

5. I was able to efficiently complete the tasks and scenarios using this system.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

6. I felt comfortable using this system.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

7. It was easy to learn to use this system.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

8. I believe I could become productive quickly using this system.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

9. The system gave error messages that clearly told me how to fix problems.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

10. Whenever I made a mistake using the system, I could recover easily and quickly.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

11. The information (such as on-line help, on-screen messages and other documentation) provided with this system was clear.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

12. It was easy to find the information I needed.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

13. The information provided for the system was easy to understand.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

14. The information was effective in helping me complete the tasks and scenarios.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

15. The organization of information on the system screens was clear.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

Note: *The “interface” includes those items that you use to interact with the system. For example, some components of the interface are the keyboard, the mouse, the microphone, and the screens (including their use of graphics and language).*

16. The interface of this system was pleasant.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

17. I liked using the interface of this system.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

18. This system has all the functions and capabilities I expect it to have.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

19. Overall, I am satisfied with this system.

STRONGLY AGREE	1	2	3	4	5	6	7	STRONGLY DISAGREE	N/A
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COMMENTS:

Appendix B. Raw Data

Study	Dev	Stage	Gender	Style	ExpCnd	Completeness	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19
CNDS	CIC	Dev	M	Discrete	Dictation	Complete	2	2	2	2	2	2	2	3	4	2	2	2	2	2	2	1	1	2	2
CNDS	CIC	Dev	M	Cont	Dictation	Complete	2	3	2	3	3	2	2	2	4	2	2	2	2	3	2	1	1	3	2
CNDS	CIC	Dev	M	Discrete	Dictation	Incomplete	4	3	4	5	5	4	2	7	4	4	3	.	3	3	4	5	5	5	4
CNDS	CIC	Dev	M	Cont	Dictation	Incomplete	7	5	7	5	6	3	3	7	4	5	3	4	4	7	.	5	7	7	7
CNDS	CIC	Dev	F	Discrete	Dictation	Incomplete	3	2	1	2	4	3	2	4	.	6	2	.	2	3	3	3	6	.	4
CNDS	CIC	Dev	F	Cont	Dictation	Incomplete	3	2	3	5	2	5	1	3	7	6	3	.	2	.	3	2	4	.	4
CNDS	CIC	Dev	F	Discrete	Dictation	Incomplete	2	2	2	2	2	2	2	2	5	2	.	.	3	3	3	2	2	2	2
CNDS	CIC	Dev	F	Cont	Dictation	Incomplete	3	2	2	3	2	1	1	1	4	3	5	.	3	3	2	2	2	1	2
CNDS	CIC	Dev	F	Discrete	Dictation	Incomplete	3	3	3	5	5	3	3	5	.	3	.	.	.	.	3	3	3	3	5
CNDS	CIC	Dev	F	Cont	Dictation	Incomplete	3	2	2	3	2	2	2	2	.	3	.	.	.	.	2	2	2	2	3
CNDS	CIC	Dev	F	Discrete	Dictation	Complete	2	2	2	2	1	2	1	2	2	1	1	1	2	1	1	1	1	1	1
CNDS	CIC	Dev	F	Cont	Dictation	Complete	2	1	2	2	2	2	3	2	2	1	1	1	1	1	1	1	1	1	1
CNDS	CIC	Dev	M	Discrete	Dictation	Complete	3	2	3	3	5	3	2	3	2	2	2	2	3	2	3	2	2	2	2
CNDS	CIC	Dev	M	Cont	Dictation	Complete	2	2	3	3	3	2	2	2	3	3	2	3	2	2	2	3	3	2	3
CNDS	CIC	Dev	M	Discrete	Dictation	Incomplete	1	2	1	1	1	2	1	1	.	1	1	.	2	2	1	2	2	1	2
CNDS	CIC	Dev	M	Cont	Dictation	Complete	1	2	1	1	1	2	2	2	1	3	1	1	1	1	1	1	1	1	1
BENCHM	CIC	Prod	NA	Cont	Standard	Incomplete	3	2	2	3	4	3	2	2	.	3	2	4	2	3	4	2	2	2	2
BENCHM	CIC	Prod	NA	Cont	Standard	Complete	2	2	3	3	3	2	4	2	4	5	5	6	4	4	6	1	1	1	2
BENCHM	CIC	Prod	NA	Cont	Standard	Complete	7	7	5	5	5	7	3	5	7	7	7	7	7	7	1	1	1	1	5
BENCHM	CIC	Prod	NA	Cont	Standard	Incomplete	3	3	4	4	4	3	3	3	.	4	5	4	4	4	4	2	3	5	3
ACCENT	CIC	Dev	F	Discrete	Dictation	Incomplete	1	1	1	1	2	1	1	1	1	2	1	.	1	.	1	1	1	1	1
ACCENT	CIC	Dev	F	Discrete	Dictation	Incomplete	4	4	4	5	4	3	3	3	6	5	4	3	.	.	.	4	4	3	3
ACCENT	CIC	Dev	M	Discrete	Dictation	Complete	5	5	5	7	5	7	5	4	3	6	4	4	4	5	5	4	4	6	4
ACCENT	CIC	Dev	M	Discrete	Dictation	Incomplete	3	3	1	1	1	1	3	4	.	3	.	.	.	.	3	3	3	3	3

MSD	CIC	Dev	M	Discrete	Dictation	Incomplete	2	2	2	2	2	2	2	2	5	2	4	.	3	2	2	2	2	2	
MSD	CMC	Dev	M	Discrete	Dictation	Incomplete	2	3	2	3	3	2	3	5	6	3	2	.	2	3	3	2	2	5	4
MSD	CIC	Dev	M	Discrete	Dictation	Incomplete	2	2	1	1	1	1	2	2	3	3	2	3	.	.	2	1	1	2	2
MSD	CMC	Dev	M	Discrete	Dictation	Complete	3	2	2	2	2	4	3	2	3	5	2	1	2	2	1	2	3	2	2
MSD	CIC	Dev	M	Discrete	Dictation	Incomplete	1	1	1	1	1	1	1	1	.	1	.	.	.	.	.	1	1	1	1
MSD	CMC	Dev	M	Discrete	Dictation	Incomplete	3	3	3	4	4	2	1	3	.	3	.	.	.	.	.	1	1	1	3
MSD	CIC	Dev	M	Discrete	Dictation	Incomplete	3	3	3	2	3	3	2	3	.	2	4	.	3	3	3	3	3	1	3
MSD	CMC	Dev	M	Discrete	Dictation	Incomplete	3	3	3	3	3	4	2	2	.	3	2	.	2	2	2	2	3	1	3
DICTDV	CDC	Prod	F	Discrete	Dictation	Incomplete	6	6	3	7	6	5	3	5	.	5	2	.	.	.	3	5	5	3	6
DICTDV	CDC	Prod	M	Discrete	Dictation	Complete	4	2	5	6	5	2	2	6	4	3	3	3	3	3	3	2	4	5	6
DICTDV	CDC	Prod	F	Discrete	Dictation	Complete	6	1	3	7	5	2	1	7	3	6	6	5	4	5	1	2	2	7	6
DICTDV	CDC	Prod	M	Discrete	Dictation	Complete	6	6	6	6	6	5	4	6	3	5	3	3	3	3	3	3	3	2	6
COMP98	CIC	Prod	M	Cont	Dictation	Complete	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
COMP98	CDC	Prod	M	Cont	Dictation	Complete	1	1	1	1	1	2	1	2	4	3	1	1	1	1	1	1	1	1	1
COMP98	CIC	Prod	M	Cont	Dictation	Complete	2	2	2	3	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1
COMP98	CDC	Prod	M	Cont	Dictation	Complete	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
COMP98	CIC	Prod	M	Cont	Dictation	Incomplete	3	2	3	3	2	1	2	2	.	3	.	.	.	.	.	2	2	3	2
COMP98	CDC	Prod	M	Cont	Dictation	Incomplete	3	3	3	4	4	1	2	3	.	4	.	.	.	.	.	3	3	2	3
COMP98	CIC	Prod	M	Cont	Dictation	Incomplete	3	3	4	3	4	4	3	3	.	3	3	4	2	2	2	2	3	.	2
COMP98	CDC	Prod	M	Cont	Dictation	Incomplete	4	4	4	4	4	3	3	5	.	4	4	.	4	4	4	3	3	.	4
COMP98	CIC	Prod	F	Cont	Dictation	Complete	2	2	2	2	3	2	2	1	4	2	4	3	3	3	2	2	2	3	2
COMP98	CDC	Prod	F	Cont	Dictation	Complete	3	3	3	4	4	3	3	1	5	4	5	5	2	2	2	2	2	3	3
COMP98	CIC	Prod	F	Cont	Dictation	Incomplete	2	2	2	2	2	2	2	2	6	2	.	.	2	.	2	3	3	2	2
COMP98	CDC	Prod	F	Cont	Dictation	Incomplete	3	3	5	5	5	2	2	5	.	6	.	.	.	.	.	2	2	6	5
COMP98	CIC	Prod	F	Cont	Dictation	Incomplete	2	2	2	2	2	3	2	2	.	3	.	.	2	2	2	2	2	2	3
COMP98	CDC	Prod	F	Cont	Dictation	Incomplete	3	3	3	3	3	4	3	3	.	4	.	.	2	2	3	2	3	4	3
COMP98	CIC	Prod	F	Cont	Dictation	Incomplete	4	5	4	5	5	4	4	4	.	.	.	.	.	.	.	5	5	4	5
COMP98	CDC	Prod	F	Cont	Dictation	Incomplete	5	5	4	5	5	4	3	4	.	.	.	.	.	.	.	4	4	4	4

DISCB	CIC	Prod	M	Discrete	Dictation	Incomplete	2	2	2	2	2	2	2	2	3	2	2	.	.	.	3	2	2	2	2
DISCB	CIC	Prod	M	Discrete	Dictation	Incomplete	1	1	1	2	1	1	1	3	3	3	1	.	3	2	1	1	1	3	1
DISCB	CIC	Prod	M	Discrete	Dictation	Complete	2	5	2	2	2	4	5	4	5	5	3	4	3	4	3	3	2	3	2
DISCB	CIC	Prod	F	Discrete	Dictation	Complete	3	4	4	6	1	3	2	2	5	6	3	2	2	3	1	2	1	4	3
DISCB	CIC	Prod	F	Discrete	Dictation	Complete	2	2	3	3	3	2	2	4	4	2	3	3	3	3	3	3	4	4	3
DISCB	CIC	Prod	F	Discrete	Dictation	Complete	5	5	3	4	4	4	4	5	4	4	4	5	4	4	4	3	3	3	3
DISCB	CIC	Prod	F	Discrete	Dictation	Incomplete	3	3	3	3	3	3	3	3	6	5	.	.	.	.	.	2	2	6	4
DISCB	CIC	Prod	F	Discrete	Dictation	Incomplete	5	3	3	4	4	6	6	4	5	3	.	4	2	2	2	1	1	3	4
DISCB	CIC	Prod	F	Discrete	Dictation	Incomplete	3	3	3	3	3	1	1	1	.	4	.	.	.	.	.	1	1	1	1
DISCB	CIC	Prod	M	Discrete	Dictation	Complete	3	2	2	3	4	2	2	4	3	2	2	3	2	2	3	2	2	2	3
DISCB	CIC	Prod	M	Discrete	Dictation	Complete	2	2	2	2	2	2	2	1	3	3	1	2	2	2	1	1	1	1	1
DISCB	CIC	Prod	M	Discrete	Dictation	Incomplete	1	2	2	1	1	1	1	1	1	1	1	1	.	.	.	1	1	1	1
DISCK	CKC	Prod	M	Discrete	Dictation	Complete	5	3	5	6	4	5	2	5	4	2	3	3	2	2	2	2	2	3	5
DISCK	CKC	Prod	M	Discrete	Dictation	Complete	2	3	3	5	3	3	3	2	4	2	5	4	3	3	3	2	2	3	3
DISCK	CKC	Prod	F	Discrete	Dictation	Complete	3	2	2	5	2	6	2	6	2	3	4	4	3	4	5	3	2	5	3
DISCK	CKC	Prod	F	Discrete	Dictation	Incomplete	2	2	2	2	2	2	2	1	5	3	.	.	.	.	2	4	4	3	2
DISCK	CKC	Prod	M	Discrete	Dictation	Complete	5	4	3	5	5	4	3	5	3	4	3	3	2	3	4	5	4	5	4
DISCK	CKC	Prod	M	Discrete	Dictation	Complete	4	4	2	3	3	2	1	3	7	4	7	7	5	6	4	2	2	5	4
DISCK	CKC	Prod	F	Discrete	Dictation	Incomplete	5	5	4	6	4	4	4	4	4	3	.	.	3	3	3	1	1	1	4
DISCK	CKC	Prod	F	Discrete	Dictation	Complete	3	3	3	3	3	2	2	1	3	3	3	3	2	2	2	2	2	2	2
DOCKBAR	CIC	Dev	M	Cont	Standard	Incomplete	2	2	2	2	2	2	3	2	.	4	.	.	3	3	4	2	2	2	2
DOCKBAR	CIC	Dev	F	Cont	Standard	Incomplete	1	2	1	1	1	1	1	1	2	2	.	.	2	1	1	1	1	1	1
DOCKBAR	CIC	Dev	M	Cont	Standard	Complete	2	2	2	2	2	1	1	1	5	3	5	5	5	4	2	2	2	1	1
DOCKBAR	CIC	Dev	F	Cont	Standard	Complete	2	2	2	2	2	2	2	2	4	3	3	3	2	2	3	2	2	2	2

CONT97	CIC	Dev	M	Cont	Dictation	Complete	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
CONT97	CIC	Dev	M	Cont	Dictation	Incomplete	2	2	2	2	2	.	2	2	2	2	.	2	2	2	3	3	3	3		
CONT97	CIC	Dev	M	Cont	Dictation	Incomplete	1	1	1	1	1	1	.	1	1	1	.	.	.	.	.	2	2	2	1
CONT97	CIC	Dev	F	Cont	Dictation	Incomplete	2	1	1	2	3	1	.	3	.	3	.	.	.	.	.	2	2	.	2
CONT97	CIC	Dev	F	Cont	Dictation	Complete	2	2	2	2	3	3	2	3	3	3	2	2	3	3	2	2	2	3	3	
CONT97	CIC	Dev	F	Cont	Dictation	Complete	2	2	2	2	2	2	2	2	4	2	3	3	3	3	2	2	2	3	2	
CONT97	CIC	Dev	F	Cont	Dictation	Incomplete	3	2	3	3	4	2	2	2	.	3	.	.	.	.	.	2	2	3	3
CONT97	CIC	Dev	F	Cont	Dictation	Complete	3	4	3	4	4	4	2	2	5	4	2	2	2	2	2	3	3	4	4	
CONT97	CIC	Dev	F	Cont	Dictation	Incomplete	1	2	3	3	1	1	1	1	.	1	.	.	.	.	.	1	1	1	1
CONT97	CIC	Dev	M	Cont	Dictation	Complete	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
CONT97	CIC	Dev	M	Cont	Dictation	Incomplete	6	4	6	6	6	6	4	6	7	7	.	.	.	6	4	4	4	2	6	
CONT97	CIC	Dev	M	Cont	Dictation	Incomplete	2	2	4	4	4	4	.	.	6	2	.	.	.	.	.	4	4	3	3
DISCD2	CDC	Prod	M	Discrete	Dictation	Complete	4	3	3	3	3	3	3	5	5	3	4	3	3	3	3	3	3	4	3	
DISCD2	CDC	Prod	M	Discrete	Dictation	Complete	3	2	2	6	5	3	2	7	3	2	2	3	2	2	3	2	2	4	6	
DISCD2	CDC	Prod	F	Discrete	Dictation	Complete	4	3	4	5	6	5	3	6	4	4	4	4	3	3	3	3	4	4	5	
DISCD2	CDC	Prod	F	Discrete	Dictation	Complete	1	1	2	2	1	1	1	1	2	3	1	1	1	1	1	1	2	2	1	1
DISCD2	CDC	Prod	M	Discrete	Dictation	Complete	3	3	5	5	5	3	2	7	4	2	3	3	2	5	3	3	4	3	4	
DISCD2	CDC	Prod	M	Discrete	Dictation	Complete	3	3	2	3	3	2	1	3	1	2	2	2	3	2	2	3	3	2	3	
DISCD2	CDC	Prod	F	Discrete	Dictation	Incomplete	4	4	4	.	4	3	.	6	.	.	.	.	.	.	.	.	.	.	.
DISCD2	CDC	Prod	F	Discrete	Dictation	Complete	4	1	5	6	4	3	1	4	3	5	4	3	1	2	4	1	2	4	3	
DISCD1	CDC	Prod	M	Discrete	Dictation	Complete	7	7	7	7	7	5	3	7	2	7	1	3	2	2	2	3	3	1	7	
DISCD1	CDC	Prod	M	Discrete	Dictation	Complete	4	1	6	5	5	3	2	6	6	4	3	3	2	4	3	4	4	5	5	
DISCD1	CDC	Prod	F	Discrete	Dictation	Incomplete	4	5	6	7	7	4	2	7	.	5	.	.	1	.	1	3	2	4	5	
DISCD1	CDC	Prod	F	Discrete	Dictation	Incomplete	1	1	1	1	1	1	1	4	2	1	2	1	1	1	1	1	1	.	5	
DISCD1	CDC	Prod	M	Discrete	Dictation	Complete	6	5	5	6	6	5	3	6	5	6	4	5	4	5	2	3	5	6	6	
DISCD1	CDC	Prod	M	Discrete	Dictation	Complete	3	4	3	3	3	3	2	2	3	2	3	3	3	3	2	2	2	2	3	
DISCD1	CDC	Prod	F	Discrete	Dictation	Incomplete	5	5	6	6	6	6	5	5	.	5	.	.	.	5	.	4	4	6	5	
DISCD1	CDC	Prod	F	Discrete	Dictation	Complete	6	6	7	6	7	6	5	7	5	7	4	5	5	2	4	2	5	5	4	
DISCD1	CDC	Prod	F	Discrete	Dictation	Incomplete	2	2	3	.	3	2	2	2	6	5	.	5	3	3	3	2	2	2	3	

DISCA	CIC	Prod	M	Discrete	Dictation	Complete	1	1	1	1	1	1	1	1	2	1	2	2	2	2	2	1	1	1	1
DISCA	CIC	Dev	M	Discrete	Dictation	Complete	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	3	3	3	3
DISCA	CIC	Dev	M	Discrete	Dictation	Complete	1	1	1	1	1	1	1	1	5	1	2	1	1	1	1	1	2	1	1
DISCA	CIC	Dev	M	Discrete	Dictation	Complete	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	1
DISCA	CIC	Prod	F	Discrete	Dictation	Complete	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2
DISCA	CIC	Dev	F	Discrete	Dictation	Incomplete	1	1	1	1	1	1	1	1	.	3	1	1	1	1	1	1	1	2	1
DISCA	CIC	Dev	F	Discrete	Dictation	Incomplete	2	2	2	1	1	2	2	1	.	.	2	2	2	1	1	1	1	2	2
DISCA	CIC	Dev	F	Discrete	Dictation	Incomplete	1	1	2	1	1	1	1	1	.	.	2	1	1	1	1	1	1	2	1
DISCA	CIC	Prod	F	Discrete	Dictation	Complete	5	4	4	5	4	5	4	5	5	5	4	4	5	4	4	4	5	5	5
DISCA	CIC	Dev	F	Discrete	Dictation	Complete	5	4	5	5	5	5	5	5	4	4	4	4	3	4	4	4	5	5	4
DISCA	CIC	Dev	F	Discrete	Dictation	Complete	3	3	4	3	4	3	3	4	3	3	4	3	4	4	4	3	3	5	4
DISCA	CIC	Dev	F	Discrete	Dictation	Complete	3	3	3	3	3	3	3	4	4	4	3	2	2	2	3	3	4	4	3
DISCA	CIC	Prod	M	Discrete	Dictation	Complete	2	2	3	3	3	2	2	3	3	2	2	2	2	2	2	2	2	3	2
DISCA	CIC	Dev	M	Discrete	Dictation	Complete	2	1	3	3	3	2	1	3	4	2	2	2	2	2	2	2	2	4	2
DISCA	CIC	Dev	M	Discrete	Dictation	Complete	2	1	2	3	3	2	1	3	3	2	2	2	2	2	2	2	1	3	2
DISCA	CIC	Dev	M	Discrete	Dictation	Complete	2	1	2	2	2	2	1	2	3	2	2	1	2	2	2	1	2	3	2
DISCA	CIC	Prod	F	Discrete	Dictation	Complete	2	3	3	3	3	3	3	4	3	3	4	4	4	4	4	2	2	3	3
DISCA	CIC	Dev	F	Discrete	Dictation	Complete	4	4	4	5	5	3	4	4	5	4	4	5	4	4	5	3	4	4	3
DISCA	CIC	Dev	F	Discrete	Dictation	Complete	4	4	4	5	4	3	4	5	5	4	4	5	4	5	5	3	3	4	4
DISCA	CIC	Dev	F	Discrete	Dictation	Complete	4	4	3	3	4	3	3	4	4	5	5	5	4	4	4	4	4	4	4
DISCA	CIC	Prod	M	Discrete	Dictation	Incomplete	3	3	4	4	4	4	4	5	.	.	.	.	.	.	.	4	4	4	4
DISCA	CIC	Dev	M	Discrete	Dictation	Incomplete	4	4	4	4	4	4	4	6	.	6	.	.	.	.	5	3	3	6	5
DISCA	CIC	Dev	M	Discrete	Dictation	Incomplete	3	3	3	4	4	3	3	4	4	.	4	.	.	.	.	3	3	3	3
DISCA	CIC	Dev	M	Discrete	Dictation	Incomplete	4	4	4	5	4	4	4	5	.	.	.	.	.	.	3	3	3	4	
DISCA	CIC	Prod	M	Discrete	Dictation	Complete	3	3	2	3	2	2	2	3	3	3	3	3	2	2	2	2	2	2	2
DISCA	CIC	Dev	M	Discrete	Dictation	Complete	2	2	2	2	2	2	2	3	3	2	2	3	2	2	2	2	2	2	2
DISCA	CIC	Dev	M	Discrete	Dictation	Complete	2	2	2	2	2	2	2	3	3	2	3	3	2	2	2	2	2	2	2
DISCA	CIC	Dev	M	Discrete	Dictation	Complete	2	2	2	3	2	2	2	4	5	3	3	3	2	2	3	2	2	2	3
DISCA	CIC	Prod	F	Discrete	Dictation	Complete	3	3	2	3	3	3	2	1	3	3	4	4	3	3	4	3	3	4	2
DISCA	CIC	Dev	F	Discrete	Dictation	Complete	3	3	3	4	3	3	3	2	3	4	3	3	3	3	3	2	2	3	2
DISCA	CIC	Dev	F	Discrete	Dictation	Complete	3	3	3	4	4	3	2	2	3	3	3	3	3	3	4	3	3	4	3
DISCA	CIC	Dev	F	Discrete	Dictation	Complete	2	3	2	3	3	2	1	1	2	3	2	2	3	3	3	2	2	3	2

XPAD2	CIC	Dev	M	Pen	Standard	Complete	2	2	2	2	2	2	2	1	3	2	2	3	3	3	2	2	2	2	2	
XPAD2	CIC	Dev	M	Pen	Standard	Complete	3	3	3	2	3	2	2	3	4	4	3	3	2	2	4	3	4	4	4	
XPAD2	CIC	Dev	F	Pen	Standard	Incomplete	2	3	4	5	4	4	4	1	7	7	7	6	6	6	4	1	1	.	4	
XPAD2	CIC	Dev	M	Pen	Standard	Complete	2	2	2	3	2	2	2	3	4	4	3	3	3	3	3	3	3	3	3	
XPAD2	CIC	Dev	M	Pen	Standard	Complete	1	1	1	1	2	1	1	1	1	1	1	2	1	1	1	1	1	2	1	
XPAD2	CIC	Dev	F	Pen	Standard	Complete	1	1	1	2	2	1	1	1	3	2	2	3	2	2	1	1	1	1	1	
XPAD2	CIC	Dev	F	Pen	Standard	Complete	2	2	2	2	2	2	1	2	4	3	3	3	2	2	2	2	2	2	2	
XPAD2	CIC	Dev	M	Pen	Standard	Incomplete	2	1	2	1	1	1	2	1	.	1	2	2	2	2	3	1	1	2	1	
XPAD2	CIC	Dev	M	Pen	Standard	Complete	3	3	3	2	3	3	2	2	6	5	3	2	1	3	3	1	2	4	4	
XPAD2	CIC	Dev	F	Pen	Standard	Incomplete	2	1	2	1	.	.	.	.	1	1	1	1	1	1	1	1	1	1	1
PC	CIC	Dev	F	PC	Standard	Incomplete	1	1	1	1	1	1	1	2	.	3	2	3	2	2	3	1	1	1	1	
PC	CIC	Dev	F	PC	Standard	Complete	1	1	3	2	3	1	1	1	2	2	1	2	1	1	2	1	1	1	1	
PC	CIC	Dev	F	PC	Standard	Complete	3	3	2	2	2	2	1	1	2	5	5	4	4	2	3	2	2	4	1	
PC	CIC	Dev	F	PC	Standard	Complete	2	1	1	3	2	2	1	1	5	3	1	1	1	1	3	2	2	1	1	
PC	CIC	Dev	F	PC	Standard	Complete	2	2	2	2	3	2	2	2	3	2	3	2	2	2	2	2	2	1	2	
DICTSS	CIC	Prod	M	Discrete	Standard	Complete	2	2	2	2	2	2	2	2	2	2	3	2	2	1	3	4	4	4	3	
DICTSSG	CIC	Dev	M	Discrete	Standard	Complete	2	2	2	2	2	3	2	2	2	2	3	3	3	2	2	1	1	4	2	
DICTSS	CIC	Prod	F	Discrete	Standard	Complete	4	4	4	4	4	4	4	2	2	4	3	4	4	3	3	2	3	5	3.5	
DICTSSG	CIC	Dev	F	Discrete	Standard	Complete	3	3	3	3	3	3	3	3	4	4	3	3.5	2.5	2.5	2	2.5	2.5	2.5	2.5	
DICTSS	CIC	Prod	F	Discrete	Standard	Complete	1	1	1	1	1	1	1	1	2	1	1	3	1	1	1	1	1	3	1	
DICTSSG	CIC	Dev	F	Discrete	Standard	Complete	1	2	1	3	1	1	1	1	1	2	1	4	1	1	4	1	1	1	1	
DICTSS	CIC	Prod	F	Discrete	Standard	Complete	2	2	2	2	2	1	1	1	3	2	2	2	2	2	2	1	1	3	2	
DICTSSG	CIC	Dev	F	Discrete	Standard	Incomplete	2	2	2	1	1	1	1	1	.	.	2	2	2	2	2	2	2	2	2	
DICTSS	CIC	Prod	F	Discrete	Standard	Incomplete	2	2	2	1	1	2	1	5	.	4	3	7	2	.	5	4	4	.	2	
DICTSSG	CIC	Dev	F	Discrete	Standard	Incomplete	3	3	2	1	2	2	2	6	.	4	2	5	.	.	7	3	5	.	3	
DICTSS	CIC	Prod	F	Discrete	Standard	Complete	1	1	1	2	2	1	1	1	1	2	1	2	1	2	1	2	2	2	1	
DICTSSG	CIC	Dev	F	Discrete	Standard	Complete	2	1	2	1	3	2	2	1	2	1	1	3	2	1	2	1	1	2	2	
DICTSS	CIC	Prod	F	Discrete	Standard	Incomplete	2	2	1	2	1	1	1	1	.	.	1	1	1	1	1	1	4	4	1	2
DICTSSG	CIC	Dev	F	Discrete	Standard	Incomplete	1	1	1	1	1	1	1	1	.	1	1	1	1	1	1	1	1	1	2	1
DICTSS	CIC	Prod	M	Discrete	Standard	Complete	4	3	5	3	4	5	2	3	6	5	4	3	4	3	1	2	2	4	5	
DICTSSG	CIC	Dev	M	Discrete	Standard	Complete	3	2	2	3	3	2	1	1	4	3	2	3	4	4	3	2	3	4	4	
DICTSSG	CIC	Dev	NA	Discrete	Standard	Complete	4	4	4	4	4	3	4	6	4	4	6	4	5	4	7	7	6	3	4	
DICTSSG	CIC	Dev	F	Discrete	Standard	Complete	1	2	1	2	1	1	2	1	2	1	2	2	2	1	1	1	1	1	1	
DICTSSG	CIC	Dev	F	Discrete	Standard	Complete	3	2	1	2	2	1	2	1	3	3	3	2	2	3	2	4	2	2	2	

GAMER	CIC	Dev	M	GAME	Standard	Incomplete	3	3	.	5	4	5	5	4	4	2	4	3	5	4	5	4	3	2	3
GAMER	CIC	Dev	M	GAME	Standard	Incomplete	3	3	.	3	3	3	3	3	2	2	2	3	3	3	4	3	1	1	2
GAMER	CIC	Dev	M	GAME	Standard	Incomplete	1	1	.	1	1	1	1	1	1	1	.	.	3	2	2	1	2	1	2
GAMER	CIC	Dev	M	GAME	Standard	Incomplete	2	4	.	3	3	3	3	2	2	2	.	3	2	2	2	2	2	2	2
GAMER	CIC	Dev	M	GAME	Standard	Incomplete	2	3.5	.	2	1	1	1	2	1	1	5	4	3	3	3	1	2	2.5	1
GAMER	CIC	Dev	M	GAME	Standard	Incomplete	3	2	.	3	3	1	3	2	1	1	7	4	1	3	1	1	4	2	1
CONT98	CIC	Dev	M	Cont	Standard	Complete	4	2	6	6	6	4	5	5	6	5	6	5	6	6	4	1	1	6	6
CONT98	CIC	Dev	F	Cont	Standard	Complete	3	3	3	3	3	3	2	2	5	4	5	4	4	3	3	2	2	2	3
CONT98	CIC	Dev	F	Cont	Standard	Complete	3	4	5	4	4	2	2	4	4.5	5	4	3	4	4	4	4	3	3	3
CONT98	CIC	Dev	M	Cont	Standard	Complete	2	3	3	3	3	2	2	2	4	3	2	2	2	2	2	2	1	4	2
CONT98	CIC	Dev	M	Cont	Standard	Incomplete	3	2	3	3	2	1	3	1	5	4	.	2	3	2	2	1	2	5	1
CONT98	CIC	Dev	F	Cont	Standard	Incomplete	2	1	1	1	2	1	1	1	.	1	1	5	1	2	1	1	1	1	1
CONT98	CIC	Dev	F	Cont	Standard	Complete	2	2	3	2	2	2	1	1	6	3	3	2	1	1	2	2	1	2	1
CONT98	CIC	Dev	F	Cont	Standard	Complete	2	2	3	3	2	2	2	2	6	5	6	5	3	6	6	2	2	2	3
CONT98	CIC	Dev	F	Cont	Standard	Incomplete	5	5	6	5	6	5	5	3	6	.	5	5	5	6	5	5	5	4	1
CONT98	CIC	Dev	F	Cont	Standard	Incomplete	3	3	4	.	3	3	1	1	4	4	2	3	.	3	2	1	1	1	.
CONT98	CIC	Dev	M	Cont	Standard	Complete	3	2	2	3	4	1	2	1	2	4	2	4	1	1	1	1	2	2	2
CONT98	CIC	Dev	F	Cont	Standard	Complete	3	4	3	3	4	4	3	4	4	3	3	3	3	3	3	3	3	4	3
CONT98	CIC	Dev	F	Cont	Standard	Incomplete	4	4	6	5	4	3	2	2	6	4	.	.	.	.	.	2	2	3	4
CONT98	CIC	Dev	M	Cont	Standard	Complete	4	5	4	5	6	5	3	5	7	5	5	4	4	4	5	5	4	6	4
CONT98	CIC	Dev	F	Cont	Standard	Complete	4	5	5	6	4	3	3	2	6	4	3	4	4	3	3	3	3	2	3
CONT98	CIC	Dev	F	Cont	Standard	Complete	4	4	4	4.5	4	2	2	2	6	3	2	2	2	2	3	2	2	2	3
CONT98	CIC	Dev	F	Cont	Standard	Complete	4	3	1	3	4	3	4	1	4	4	4	4	2	4	2	7	7	7	7
CONT98	CIC	Dev	M	Cont	Standard	Incomplete	3	2	3	2	2	3	2	2	6	6	3	3	3	.	2	2	2	4	4
CONT98	CIC	Dev	M	Cont	Standard	Complete	6	5	7	5	6	6	5	5	7	6	5	5	3	5	5	5	5	7	5
CONT98	CIC	Prod	M	Cont	Standard	Complete	5	5	5	5	5	5	5	4	7	5	7	7	6	5	6	6	6	6	5
CONT98	CIC	Prod	F	Cont	Standard	Complete	2	2	2	2	2	2	2	2	4	3	3	2	3	3	3	2	2	2	2
CONT98	CIC	Prod	M	Cont	Standard	Complete	4	5	3	2	3	4	3	1	7	3	6	5	5	4	5	3	3	2	3
CONT98	CIC	Prod	F	Cont	Standard	Complete	3	3	3	3	3	3	2	2	4	4	4	3	3	3	2	2	2	2	2

CONT99	CIC	Prod	NA	Cont	Standard	Incomplete	3	2	2	3	4	3	2	2	.	3	2	4	2	3	4	2	2	2	2
CONT99	CIC	Prod	NA	Cont	Standard	Complete	2	2	3	3	3	2	4	2	4	5	5	6	4	4	6	1	1	1	2
CONT99	CIC	Prod	NA	Cont	Standard	Complete	7	7	5	5	5	7	3	5	7	7	7	7	7	1	1	1	1	5	
CONT99	CIC	Prod	NA	Cont	Standard	Incomplete	3	3	4	4	4	3	3	3	.	4	5	4	4	4	4	2	3	5	3
PROOF	CIC	Dev	M	Cont	Standard	Incomplete	5	5	6	7	7	4	2	5	.	5	.	.	5	5	6	6	6	6	6
PROOF	CIC	Dev	M	Cont	Standard	Complete	5	5	7	7	6	6	4	7	7	7	7	5	5	6	4	2	2	4	7
PROOF	CIC	Dev	M	Cont	Standard	Complete	5	4	2	6	6	4	2	6	2	2	2	2	2	2	2	2	6	2	6
PROOF	CIC	Dev	F	Cont	Standard	Complete	4	3	4	4	3	5	3	3	6	3	2	2	2	2	3	2	2	1	3
PROOF	CIC	Dev	F	Cont	Standard	Incomplete	3	3	2	5	5	3	2	1	.	2	.	.	1	1	3	2	1	2	2
PROOF	CIC	Dev	F	Cont	Standard	Complete	2	2	2	2	2	2	2	2	2	2	3	3	3	2	2	1	1	2	1