I. TYPE OF RESEARCH

- It is a quantitative research and the researchers had adopted a cross-sectional survey (data was collected using questionnaire, one time in October and November 1999). (page 17)

II. THE PROBLEM

1. Was the problem clearly defined?

- Yes. The study indicated that many top managers in organizations are aware of the importance of knowledge management systems, however little is known about the determinants of the individual’s knowledge sharing behavior. This is explained at the abstract of the research. (page 14)

2. Were hypotheses, research questions, or objectives formulated?

- Yes. The purpose and the hypotheses were clearly formulated. However, the research questions and research objectives were indirectly mentioned together in the purpose of the study (page 14).
- The purpose of the research was to develop an understanding of the factors that support or constrain the individual’s knowledge sharing behavior in the organization and how they eventually influence the knowledge sharing behaviors (page 14).
- Objectives of the study can be formulated from the purpose, research framework and hypotheses: (1) To determine the relationships between expected rewards, expected associations and expected contribution and knowledge sharing attitudes; (2) To determine the relationship between knowledge sharing attitudes and intention to share knowledge; (3) To determine the relationship between intention to share knowledge and knowledge sharing behavior; and (4) To determine whether the level of IT use has a moderating effect on knowledge sharing behavior. (page 14 & pls refer to the research framework, Figure 2 at page 16).
- 6 hypotheses were clearly formulated, (page 15 & 16) i.e.
  - H1: Expected rewards will have a positive effect on the individual’s attitude toward knowledge sharing;
  - H2: Expected associations will have a positive effect on the individual’s attitude toward knowledge sharing;
  - H3: Expected contribution will have a positive effect on the attitude toward knowledge sharing;
  - H4: Attitude toward knowledge sharing will have a positive effect on the individual’s intention to share knowledge;
  - H5: Intention to share knowledge will have a positive effect on the individual’s knowledge sharing behavior; and
  - H6: The level of IT usage of the individual will have a positive effect on the individual’s knowledge sharing behavior.

3. Was the problem logically deduced from theory?

- Yes. The main underpinning theory used was Theory of Reasoned Action by Fishbein & Ajzen (1975). (page 14 & 15)
- The researchers also combined a few other theories in the framework i.e. Social Exchange Theory (SET), Economic Exchange Theory (EET), Social Cognitive Theory
(SCT). SET was used to explain the relationship between expected associations and attitude toward knowledge sharing. EET was used to explain the relationship between expected rewards and attitude toward knowledge sharing and the SCT was used to explain the relationship between expected contribution (self-efficacy) and attitude toward knowledge sharing. The main theory to relate the attitude, intention and knowledge sharing behavior was explained using Theory of Reasoned Action (page 15 & 16).

4. What are the independent variables?
The independent variables were expected rewards, expected association and expected contribution (Figure 2, page 16, research framework).

5. What is the dependent variable?
The dependent variable was knowledge sharing behavior (Figure 2, page 16, research framework).
However the research also has 2 mediating variables i.e. attitude toward knowledge sharing and intention to share knowledge and a moderating variable i.e. the level of IT use (Figure 2, page 16, research framework).

III. THE LITERATURE REVIEW

1. Is the literature review adequate, up-to-date, critically done and selective?
• The research article was published in year 2002. The literature review has been done critically and the researchers have been selective in screening the references related to their topic. The operational definitions for all the constructs were given clearly. The research articles referred ranged from year 1989 to 2000, however the researchers have also referred to some classical articles for the theory used (page 20 & 21).

2. Are the background studies sufficient?
• Yes, brief but sufficient. In the introduction, the researchers had stated briefly an overview of knowledge management, knowledge sharing and its importance (page 14). Though brief, it is sufficient to understand the concept.

IV. THE DESIGN

1. Was an appropriate research design utilized to meet the stated objectives?
• Yes. Since the objective of the study was to determine the relationships between the independent variables and the dependent variable (knowledge sharing behavior), therefore the researchers had adopted a correlational design. Though the design was not mentioned explicitly but it is understood from the objectives, research framework and hypotheses that were formulated.

2. Was the population studied clearly specified?
• Yes. The population of the study was employees in four large Korean public service organizations (page 16). The sample size was 900 (n), 861 questionnaires were received back but only 467 were found to be usable (page 17).
3. Was the sampling method clearly outlined?
   - No. The researchers did not mention about sampling method. They only stated that 900 questionnaires were distributed, which is the sample size.

4. Was the alpha level specified \textit{a priori}?
   No. The alpha level (or level of significance) was not mentioned. However, since this is a social science research, by convention the level of significance should be 0.05.

V. \textbf{THE PROCEDURE}

1. Were treatments and/or data collecting methods described so that you could replicate the study?
   No. The data collection method was only specified briefly; no detail steps were given. This is a correlational research therefore no treatment involved.

2. Were the size and characteristics of the sample adequately described?
   Yes. The sample size was 900 Korean public service employees from 4 organizations. The characteristics of the population was presented in Table 2 (page 17) and the profile of respondents were given in table 3 (page 17) in detail, however the total respondents in table 3 was only 446 people, but it was specified as 467 in the article.

VI. \textbf{THE MEASUREMENT}

1. Was any evidence of the reliability of the instrumentation given?
   Yes. The internal consistencies for all the variables were given using cronbach-$\alpha$ in table 4 (page 18) ranging from 0.7609 to 0.9335.

2. Was any evidence of the validity of the instrumentation given?
   Yes. The researchers have explained in detail about the content and construct validity of the instruments as for some of the variables, the researchers developed their own instruments (page 17).

V. \textbf{THE INTERPRETATION}

1. Were the conclusions consistent with the obtained results?
   Yes, the conclusions were consistent and in-line with the results obtained. From the 6 hypotheses, two were found not significant (Table 6, page 18). They are, hypothesis 1 i.e. expected rewards and attitude toward knowledge sharing was found to be negatively related and hypothesis 6 i.e. the level of ICT use, were not found to be a moderator of knowledge sharing behavior. The explanations for these results were given in page 19.

2. Were the generalizations confined to the population from which the sample was drawn?
   Yes. The results could be generalized but only confined to the four large public service organizations in Korea, which the sample was drawn. Although the sampling method was not mentioned, however since the researchers employed multiple regression
analysis (a parametric test), and this test could only be employed if a probability sampling method was carried out, therefore, the findings could be generalized but only confined to the population (which the sample was drawn) i.e. the 4 Korean public service organization.

V. GENERAL

1. **Was this a significant study? Why?**

   Yes. This is a significant study because; from this study the independent variables tested i.e. expected associations and expected contributions were found to be major determinants of individual’s attitude toward knowledge sharing. However, expected rewards believed by many as most important motivator of knowledge sharing, was found not significantly related to attitude toward knowledge sharing. This could give an insight to practitioners and managers who intent to promote knowledge sharing whether rewards need to be implemented. There’s also theoretical significance associated to factors, expected associations (SET) and expected contribution (SCT).