

LEVEL 7 ASSESSMENT SPECIFICATION

Student name:	Lee Kar Chung Felix	Student ID number:	1818882
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Lecturer:	Dr. Andrew Chan	Internal Verifier:	
Assignment Title:	Final Component 2 - Telemedicine Adoption in Hong Kong - Reflection	Word count (or equivalent):	965 words (excluding words on this page)
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Submission method:	All written assessments, where practical and possible, must be submitted via Turnitin unless otherwise instructed by the Lecturer. (Please DO NOT put this assessment specification into Turnitin or it will match many similarities with other students' submissions.) Alternative submission method (if applicable): Late submission of the assessment will result in a late penalty mark. Penalties for late submission: Up to one week late, maximum mark of 50%. Over one week late, 0%. Only the Extenuating Circumstances Panel may approve a change to submission dates.		
Academic honesty / referencing:	Academic honesty is required. In the main body of your submission you must give credit to authors on whose research and ideas your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have used, cited or quoted in order to complete this assessment.		

Reflecting on the survey procedures and findings, the following areas are worthy of additional analysis:

1. Sampling – How samples were chosen and how it could be done better in the future;
2. Constructs determination – how the constructs were developed and how better constructs could be developed;
3. Items in questionnaire – how the items were chosen and how better items can be developed; and
4. Quantitative analysis – how that could be done better.

1. Sampling

Non-probabilistic sampling was chosen for convenience due to the limited time provided for completing the assignment. For business researches, such sampling method would not stand the test of peer review. The sample size was also too small ($N=35$) for quantitative analysis to be conducted. As a rule of thumb, each construct would require 20-30 subjects, and each item would require at least 5 subjects for factor analysis to be conducted (Hoskins & Mariano, 2004). This means that a total of at least 80 to 120 samples should have been collected.

Further, the convenience sampling method of asking doctors to ask their colleagues to complete such questionnaire could lead to biased samples (i.e. doctors might only forward the questionnaire to those doctors that they also think would be open to the idea of telemedicine). The attempt to survey doctors of all specialties was also not designed properly, as certain specialties naturally do not lend themselves to adoption of telemedicine (i.e. orthopedic surgeries). A better approach for future research would be to specifically identify selected categories of specialties first and conduct studies with a larger number of doctors within a particular specialty, or at least with specialties that are more suitable of providing medical services through telemedicine (i.e. such as general practice and chronic disease management).

2. Construct determination

Constructs were designed primarily with reference to the Technology Acceptance Model ("TAM") (Davis, 1989). The TAM model seem to work well in its applications of technology adoption by other industries, but for the healthcare sector, especially for Hong Kong, the traditional TAM model seem to require further modification. Such comment was in fact also made by Professor Hu and his co-researchers back in 1999 (Hu, et al., 1999), where researchers highlighted that the TAM would need further modification and adding further constructs for the Hong Kong context.

The modification of the TAM would require expanding the examination of additional independent variables. Due to timing constraint, such recommendation from Professor Hu and other researches, including the extension of the TAM by the original author of the TAM (Venkatesh & Davis, 2000), was not followed. This ultimately led to limited constructs being examined in predicting private doctors' intention to adopt telemedicine.

Future researches on this topic should be more rigorous in its literature review prior to the design and the conduct of appropriate surveys. It is also worth noting that the adoption of telemedicine requires other healthcare providers to work together with doctors. Therefore, the literature research should expand beyond examining TAM for doctors only. There are indeed various researches conducted on the intention to adopt telemedicine by nurses and clinical assistants too. These would be useful additional insights to make the research more contemporary and relevant.

3. Items in questionnaire

The items were developed primarily by modifying questions from previous researches on doctors' adoption of telemedicine and which made references to the TAM. Based on the factor analysis conducted, the items were, in general, reliable and valid. However, a better approach would have been to set up more items for each construct and also develop more constructs beyond TAM to prevent situations where, after factor analysis and removal of factors of small loading value, insufficient items would be remaining for statistical analysis. This in fact happened for the construct of Regulatory Awareness, where after factor analysis, only 2 items were kept. Averaging the response scores from doctors based on 2 items raise questions on the overall reliability and validity of such construct.

A better approach for future researches will be to propose more items and perform a pilot study on a smaller group of respondents first (target to have at least 10 items for each construct). However, the inclusion of more items may also lead to a longer survey and may potentially frustrate the respondents in the completion of the survey. An iterative approach to the design and conduct of the survey will be required to find (i) the right composition of number of items for the survey versus (ii) the success rate of gathering more responses for statistical analysis.

4. Quantitative Analysis

Due to limited time and resources, only limited types of quantitative analysis was performed on such a small sample size. In particular, for quantitative research, one of the most important aspects is not simply to confirm that a correlation exists or not among the various dependent and independent variables, but more critically, through regression analysis, examine whether statistically significant causal relationships exist among the dependent and independent variables (i.e. structure path beta co-efficient analysis).

Further in-depth understanding on Eigenvalues is also required. It was a good learning experience on using SPSS, trying out different functions and computing different correlation outputs based on different parameters (i.e. based on different components/constructs and different mean figures).

Conclusion

This assignment has provided an introduction to the considerations required for conducting quantitative researches. Much has been learnt, and much more to learn. For the thesis to be written in the following 2 years, it is critical that the quantitative researches to be conducted will stand the tests of peer review and the test of time. Achieving such twin goals would require an urgent and deeper learning of the underlying theories and practices for high quality quantitative researches.

Such learning path is certainly worth it.

The guidance provided by Dr. Andrew Chan throughout this assignment is truly appreciated.