The factors influencing nurse graduates use of mobile technology in clinical settings in Perth Western Australia: A mixed method study

Benjamin Hay

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The factors influencing nurse graduates use of mobile technology in clinical settings in Perth Western Australia: A mixed method study

A thesis submitted in fulfilment of the requirements for the degree of

PhD in Nursing

School of Nursing and Midwifery

The University of Notre Dame Australia, Fremantle

2018

Benjamin Hay 208406
Declaration

I certify that this thesis does not, to the best of my knowledge and belief:

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Signature: 

Benjamin Hay

Date: 5th February 2018
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-Benjamin Hay
# Table of Contents

Declaration .............................................................................................................................. ii  
Acknowledgements ............................................................................................................. iii  
Table of Contents ................................................................................................................ iv  
List of Figures ....................................................................................................................... x  
List of Tables ......................................................................................................................... xiii  
Glossary ................................................................................................................................. xvi  
Abstract ................................................................................................................................ xvii

## Chapter 1

Introduction and Background .............................................................................................. 1
  Introduction ............................................................................................................................ 1
  Issues and problems underpinning the study ..................................................................... 1
  Study purpose ....................................................................................................................... 5
  Research questions ............................................................................................................ 5
  Objectives ............................................................................................................................ 5
  Study significance ............................................................................................................. 6
  Study context and setting ................................................................................................. 6
  Researchers background ................................................................................................... 7
  Conclusion .......................................................................................................................... 9

## Chapter 2

Review of the Literature ...................................................................................................... 11
  Introduction .......................................................................................................................... 11
  Nursing students and graduates use of mobile technology ......................................... 11
  Mobile technology in learning and teaching ................................................................ 15
  Mobile technology use by healthcare professionals ..................................................... 18
  Policy and guidelines associated with mobile technology use in the clinical setting .... 20
  Factors influencing the use of mobile technology in healthcare .................................. 26
  The Technology Acceptance Model (TAM) theoretical framework ............................ 27
  TAM2 Variables ................................................................................................................. 30
  Conclusion .......................................................................................................................... 32

## Chapter Three

Methodology ......................................................................................................................... 33
Intention To use (ITU) ................................................................. 72
Perceived Usefulness (PU). .......................................................... 73
Perceived Ease of Use (PEOU). ...................................................... 74
Subjective Norm (SN). ............................................................... 75
Image. ....................................................................................... 76
Job Relevance (JR) ...................................................................... 77
Output Quality (OQ). ................................................................. 77
Results Demonstrability (RD). .................................................... 78
Fisher’s exact tests ....................................................................... 80
Methods ..................................................................................... 80
Fishers exact tests results ........................................................... 81
Fishers exact Tests and gender. ..................................................... 81
Fishers exact Tests with hospital location of graduate program ...... 90
Fishers exact Tests with Length of time in Graduate program ...... 97
Fishers exact Tests with University and use of mobile technology .. 104
Fisher’s Exact Test summary of results ......................................... 106
Section Two of the survey: methods and hypotheses of the TAM2 framework .......... 107
Correlation method .................................................................. 111
Correlation analysis and results ................................................. 112
Pearson's correlation results summary ........................................ 124
Regression methods .................................................................. 126
Regression analysis and results .................................................. 129
Multiple regression .................................................................. 129
Multiple regression for Perceived Usefulness (PU) ...................... 130
Multiple regression for Intention To Use (ITU) ......................... 133
Simple linear regression for Subjective Norm (SN) on Image ......... 136
Multiple Regression summary .................................................... 138
Stepwise regression .................................................................. 139
Stepwise regression for Perceived Usefulness (PU) ...................... 139
Stepwise regression for Intention To Use (ITU) ......................... 142
Stepwise regression summary ..................................................... 145
Regression analysis results summary .......................................... 145
Chapter Summary ..................................................................... 147
Conclusion .................................................................................. 149
Chapter Five ............................................................................... 150
Qualitative Phase .................................................................................................................. 150
Introduction .......................................................................................................................... 150
Thematic analysis .................................................................................................................. 151
Stage four .............................................................................................................................. 153
Themes and subthemes from the text-based responses from the quantitative phase
................................................................................................................................................ 157
  Point of care resource. ....................................................................................................... 157
  Preferred over ward personal computers. ....................................................................... 160
  Influence of others. .......................................................................................................... 161
  Subtheme: Covert use. ..................................................................................................... 161
  Subtheme: Inconsistencies in mobile technology use. ..................................................... 163
  Subtheme: Younger staff use. .......................................................................................... 164
  Policies regarding mobile use. ......................................................................................... 165
Development of open ended questions for text-based focus group interviews ... 166
Stage five .................................................................................................................................. 167
Planning and organisation of the sample group ................................................................. 167
Themes and subthemes from the focus group interviews .................................................. 171
  Point of care resource. ..................................................................................................... 173
  Subtheme: Bridges gap from University to clinical areas. .............................................. 175
  Subtheme: Resources accessed with mobile technology ................................................. 176
  Time efficiency-preferred over ward PCs. ..................................................................... 177
  Influenced by other nurses. ............................................................................................. 178
  Subtheme: Used covertly due to negative perceptions. .................................................. 180
  Subtheme: Inconsistencies in use from senior nurses. .................................................... 181
  Support from hospital. ...................................................................................................... 183
Stage six .................................................................................................................................. 185
Recruitment .......................................................................................................................... 185
Data collection ...................................................................................................................... 186
Themes and subthemes from open ended survey ............................................................... 187
  Point of care resource. ..................................................................................................... 189
  Time efficiency. ................................................................................................................ 192
  Subtheme-Preferred over ward PCs. .............................................................................. 193
  Inconsistencies-useful/not useful. .................................................................................. 194
  Flexible education/learning. ............................................................................................ 196
  Limited support-systems/resources for use.................................................................... 197
Familiarity with device and ease of use ............................................. 198
Influence of others ................................................................. 198
Need for consistent policies & guidelines ........................................ 201
Inconsistencies-Who guides use ................................................... 202
Support initiatives ................................................................. 204
Conclusion to the chapter .......................................................... 207
Rigour and Trustworthiness ......................................................... 208
Chapter Six ................................................................................. 210
Discussion, conclusion and recommendations .................................... 210
Introduction ................................................................................... 210
Study purpose ............................................................................... 210
Usefulness at the point of care ......................................................... 211
Covert use ................................................................................... 214
Bridging the gap from University .................................................... 215
Personal mobile technology preference over ward PC’s ...................... 215
Policies and guidelines .................................................................. 216
The influence of others ................................................................. 217
Support initiatives ......................................................................... 219
Conclusion .................................................................................... 220
Limitations of the study .................................................................. 222
Implications and recommendations of findings .................................. 224
Clinical .......................................................................................... 224
Education ........................................................................................ 225
University settings ................................................................. 226
Research ....................................................................................... 226
References ..................................................................................... 227
List of Appendices ........................................................................... 247
Appendix 1: Sample Letter to Directors of Nursing & Midwifery (DON&M) at the hospital sites ................................................................. 248
Appendix 2: Invite to expert reviewers ................................................ 249
Appendix 3: Expert reviewer instructions and survey ............................ 250
Appendix 4: Expert reviewer results .................................................. 263
Appendix 5: Test-retest information sheet .......................................... 272
Appendix 6: Test-retest PowerPoint promotion ..................................... 275
Appendix 7: Kappa Scores ................................................................ 276
Appendix 8: Sample PICF (SCGH) ................................................................. 282
Appendix 9: Formal invitation letter to graduates ........................................ 286
Appendix 10: Promotional PowerPoints to graduates .................................... 287
Appendix 11: Sample email invitation to graduates ....................................... 289
Appendix 12: Graduates survey with focus group invite ............................... 290
Appendix 13: Focus group interviews open ended survey ............................ 303
Appendix 14: Transcripts for quantitative text based results.......................... 305
Appendix 15: Email invitation to graduates for the focus group interviews ...... 313
Appendix 16: Email invitation to nurse leaders for open-ended survey .......... 314
Appendix 17: Sample nurse leaders PICF for open ended survey .................. 315
Appendix 18: Open ended survey to nurse leaders ..................................... 319
List of Figures

Figure 1. The Technological Acceptance Model 2 (TAM2) (Adapted from Venkatesh & Davis, 2000) ................................................................. 30
Figure 2. A diagrammatic representation of the study design ........................................... 34
Figure 3. Stage one of the quantitative phase ................................................................. 36
Figure 4. Stage two of the quantitative phase ................................................................. 38
Figure 5. Online survey development process ................................................................. 39
Figure 6. Step one: Literature review ............................................................................. 40
Figure 7. Step two: Design of survey .............................................................................. 41
Figure 8. Step three: Expert panel review ....................................................................... 42
Figure 9. Step four: Conduct test-retest of survey tool for reliability and stability .... 45
Figure 10. Step five: Analysis of test-retest for homogeneity and equivalence ........ 47
Figure 11. Stage three of the quantitative phase ............................................................. 54
Figure 12. Participant numbers in study compared to Hospital Graduate program numbers at each site. ...................................................................... 56
Figure 13. Age group range ........................................................................................... 57
Figure 14. Gender ............................................................................................................ 57
Figure 15. Confirmation of RN and graduate program .................................................. 58
Figure 16. University attended to obtain registered nursing qualification ................. 59
Figure 17. Graduate program at current Hospital ......................................................... 59
Figure 18. Timeframe in graduate program .................................................................. 60
Figure 19. Mobile devices owned .................................................................................. 61
Figure 20. Nursing graduates use of mobile technology in the clinical setting ......... 63
Figure 21. Mobile technology in learning and teaching relating to the clinical setting .................................................................................... 64
Figure 22. Mobile technology in learning and teaching relating to the University setting and clinical practice rotations ......................................................... 66
Figure 23. Mobile technology use by nurses, other health professionals and patients .......................................................................................... 68
Figure 24. Policies and guidelines associated with mobile technology in the clinical setting ............................................................................. 71
Figure 25. Intention To Use (ITU) ................................................................................ 72
Figure 26. Perceived Usefulness (PU) .......................................................................... 73
Figure 27. Perceived Ease of Use (PEOU) .................................................................74
Figure 28. Subjective Norm (SN) ........................................................................75
Figure 29. Image ....................................................................................................76
Figure 30. Job Relevance (JR) .............................................................................77
Figure 31. Output Quality (OQ) ...........................................................................78
Figure 32. Results Demonstrability (RD) .............................................................79
Figure 33. Scatterplot comparing ITU (Y axis) to SN (X axis) .........................113
Figure 34. Scatterplot comparing PU (Y axis) to SN (X axis) .........................114
Figure 35. Scatterplot comparing Image (Y axis) to SN (X axis) ..................115
Figure 36. Scatterplot comparing PU (Y axis) to Image (X axis) ...................116
Figure 37. Scatterplot comparing PU (Y axis) to JR (X axis) .........................117
Figure 38. Scatterplot comparing PU (Y axis) to OQ (X axis) .........................118
Figure 39. Scatterplot comparing PU (Y axis) to RD (X axis) .........................119
Figure 40. Scatterplot comparing PU (Y axis) to (PEOU) (X axis) ...............120
Figure 41. Scatterplot comparing ITU (Y axis) to (PU) (X axis) ....................122
Figure 42. Scatterplot comparing ITU (Y axis) to (PEOU) (X axis) ...............123
Figure 43. Standardised residuals with dependent TAM2 variable of Perceived Usefulness (PU) with most scores along the 0 point. ....................130
Figure 44. Scatterplot of P-P Plot with dependent TAM2 variable of Perceived Usefulness (PU) with no deviations from normality .........................131
Figure 45. Histogram with dependent TAM2 variable of Perceived Usefulness (PU) ........................................................................................................131
Figure 46. Standardised residuals with dependent TAM2 variable of Intention to Use (ITU) with most scores along the 0 point. .................................134
Figure 47. Scatterplot of P-P Plot with dependent TAM2 variable of Intention To Use (ITU) with no deviations from normality .................................134
Figure 48. Histogram with dependent TAM2 variable of Intention To Use (ITU) ........................................................................................................135
Figure 49. Scatterplot of Subjective Norm (SN) against Image with superimposed regression line .................................................................137
Figure 50. Scatterplot of standardized residuals Subjective Norm (SN) against Image ..................................................................................................137
Figure 51. The Technological Acceptance Model 2 (TAM2) summary of β: standardized regression coefficients .............................................139
Figure 52. Standardised residuals with dependent TAM2 variable of Perceived Usefulness (PU) with most scores along the 0 point ........................................ 140

Figure 53. Scatterplot of P-P Plot with dependent TAM2 variable of Perceived Usefulness (PU) with no deviations from normality................................. 140

Figure 54. Histogram with dependent TAM2 variable of Perceived Usefulness (PU) ................................................................................................................. 141

Figure 55. Scatterplot of standardized residuals for Intention To Use (ITU)......... 143

Figure 56. Scatterplot of P-P Plot with dependent TAM2 variable of Intention To Use (ITU) with no deviations from normality ........................................ 143

Figure 57. Histogram with dependent TAM2 variable of Intention To Use (ITU). 144

Figure 58. Revised TAM2 model following Stepwise regression for PU (Model 3) and ITU (Model 1) with β: standardized regression coefficients............... 145

Figure 59. Design of the qualitative phase of this study ................................ 150

Figure 60. Concept map sample with initial codes ........................................... 151

Figure 61. Concept map sample with initial codes combined into potential themes ........................................................................................................... 152

Figure 62. Stage four of the qualitative phase .................................................. 153

Figure 63. Stage four final concept map sample with potential themes combined into themes/subthemes ......................................................................... 155

Figure 64. Final themes and subthemes from text-based responses from quantitative phase ................................................................................................... 156

Figure 65. Stage five of the qualitative phase .................................................... 167

Figure 66. Stage five example of the final concept map with potential themes combined into themes/subthemes ......................................................... 172

Figure 67. Final themes and subthemes from the online focus group interviews ... 173

Figure 68. Stage six of the qualitative phase ..................................................... 185

Figure 69. Stage six final concept map sample with potential themes combined into themes/subthemes ................................................................. 188

Figure 70. Final themes and subthemes from the qualitative open ended survey to nurse coordinators, educators and managers of graduate programs .......... 189

Figure 71. Expert review indicating if all questions belong in the survey .......... 270

Figure 72. Expert review indicating if all questions are grammatically correct..... 270

Figure 73. Expert review indicating if all questions are free from jargon .......... 271
List of Tables

Table 1 Cronbach Alpha Scores for Test-Retest: Section One ........................................48
Table 2 Cronbach Alpha scores for Test-Retest: Section Two (TAM2) ............................49
Table 3 ‘Gender’ Compared To ‘Using mobile technology clinically improves my organisational skills’ ...............................................................................................................82
Table 4 ‘Gender’ Compared To ‘Using mobile technology clinically improves my learning’ .........................................................................................................................82
Table 5 ‘Gender’ Compared To ‘My University encouraged mobile technology for learning within my undergraduate degree’ ..........................................................83
Table 6 ‘Gender’ Compared To ‘I would value being able to use mobile technology to access hospital policies and area specific guidelines for nursing care’ ...............84
Table 7 ‘Gender’ Compared To ‘Using mobile technology improves my performance in my job’ ................................................................................................................85
Table 8 ‘Gender’ Compared To ‘Interacting with mobile technology does not require a lot of my mental effort’ ..................................................................................86
Table 9 ‘Gender’ Compared To ‘People (nurse managers/supervisors) who are important to me think that I should use mobile technology’ .....................................87
Table 10 ‘Gender’ Compared To ‘People in my organization who use mobile technology have more prestige than those who do not’ ...................................................88
Table 11 ‘Gender’ Compared To ‘In my job, usage of mobile technology is important’ ..............................................................................................................................89
Table 12 ‘Gender’ Compared To ‘The quality of the output I get from my mobile technology is high in the clinical area’ .................................................................89
Table 13 ‘Hospital graduate program location’ Compared To ‘I value accessing relevant clinical information on mobile technology’ ...........................................91
Table 14 ‘Hospital graduate program location’ Compared To ‘In the clinical area, I use a number of applications (apps) on mobile technology’ .......................................92
Table 15 ‘Hospital graduate program location’ Compared To ‘I am encouraged to use mobile technology for educational opportunities’ .................................................93
Table 16 ‘Hospital graduate program location’ Compared To ‘I used mobile technology for learning during my clinical practice in rotations’ .........................................94
Table 17 ‘Hospital graduate program location’ Compared To ‘In my experience, it is difficult to access PC/computers in my department/ward’ .......................................95
Table 18 ‘Hospital graduate program location’ Compared To ‘Patients may think I am using mobile technology for unprofessional reasons’ ................................................................. 96
Table 19 ‘Hospital graduate program location’ Compared To ‘Having mobile technology is a status symbol in my organization’ ................................................................. 97
Table 20 ‘Length of time spent in hospital graduate program location’ Compared To ‘The education and learning department of the hospital supports staff using mobile technology’ .................................................................................................................. 98
Table 21 ‘Length of time spent in hospital graduate program location’ Compared To ‘Patients and significant others in my care ask me how to access relevant resources relating to their health by using their mobile technology’ ................................................................. 99
Table 22 ‘Length of time spent in hospital graduate program location’ Compared To ‘I find it easy to get mobile technology to do what I want it to do’ .............................. 100
Table 23 ‘Length of time spent in hospital graduate program location’ Compared To ‘People in my organization who use mobile technology have more prestige than those who do not’ ........................................................................................................... 102
Table 24 ‘Length of time spent in hospital graduate program location’ Compared To ‘Having mobile technology is a status symbol in my organization’ ......................... 103
Table 25 ‘Length of time spent in hospital graduate program location’ Compared To ‘I believe I could communicate to others the consequences of using mobile technology’ .................................................................................................................. 104
Table 26 ‘University attended’ Compared To ‘I use search engines like Google on my mobile technology device to access clinical information’ ........................................... 105
Table 27 ‘University attended’ Compared To ‘I valued using mobile technology for learning during my undergraduate nursing degree’ ...................................................... 106
Table 28 Pearson Product-Moment Correlations Between TAM2 Independent Variables and the Dependent Variable Perceived Usefulness (PU) .............................................. 121
Table 29 Pearson Product-Moment Correlations Between TAM2 Independent Variables and the Dependent Variable Intention to Use (ITU) .............................................. 123
Table 30 Summary of Hypothesis Results with Pearson Product-Moment Correlations and $R^2$ .......................................................................................................................... 126
Table 31 TAM2 Multiple Regression Results Explaining Perceived Usefulness (PU) .......................................................................................................................... 133
Table 32 TAM2 Multiple Regression Results Explaining Intention to Use (ITU) ... 136
Table 33 TAM2 Simple Linear Regression Results of Subjective Norm (SN) to Image ........................................................ ..... 138
Table 34 TAM2 Stepwise Regression Model Results Explaining Perceived Usefulness (PU) ............................................................................................................................ 142
Table 35 TAM2 Stepwise Regression Results Explaining Intention To Use (ITU) ......................................................... 144
Table 36 Nursing Graduate’s Use of Mobile Technology in the Clinical Setting: Expert Panel Review ........................................................................................................................................... 263
Table 37 Mobile Technology in Learning and Teaching Relating to the Clinical Setting: Expert Panel Review ........................................................................................................................................... 264
Table 38 Mobile Technology in Learning and Teaching Relating to the University Setting: Expert Panel Review ........................................................................................................................................... 265
Table 39 Mobile Technology Use by Nurses and Other Health Professionals: Expert Panel Review ........................................................................................................................................... 266
Table 40 Policies and Guidelines Associated with Mobile Technology in the Clinical Setting: Expert Panel Review ........................................................................................................................................... 267
Table 41 Factors Influencing the Use of Mobile Technology in Healthcare (TAM2): Expert Panel Review ........................................................................................................................................... 268
Table 42 Kappa Scores and Percentage Agreement: Nursing Graduates Use of Mobile Technology in the Clinical Setting........................................................................................................................................... 276
Table 43 Kappa Scores and Percentage Agreement: Mobile Technology in Learning and Teaching Relating to the Clinical Setting ........................................................................................................................................... 277
Table 44 Kappa Scores and Percentage Agreement: Mobile Technology in Learning and Teaching Relating to the University Setting and Clinical Practice Rotations ........................................................................................................................................... 277
Table 45 Kappa Scores and Percentage Agreement: Mobile Technology Use by Nurses, Other Health Professionals and Patients ........................................................................................................................................... 278
Table 46 Kappa Scores and Percentage Agreement: Policies and Guidelines Associated with Mobile Technology in the Clinical Setting ........................................................................................................................................... 279
Table 47 Kappa Scores and Percentage Agreement: Factors Influencing the Use of Mobile Technology in Healthcare (TAM2) ........................................................................................................................................... 280
Glossary

Applications (Apps): an application, typically a small, specialized self-contained software program downloaded onto mobile devices.

Mobile technology: Is a collective term used to describe the various types of cellular and Wi-Fi communication technology. They include a combination of hardware, operating systems, networking and software. Examples include portable smartphones and tablets.

PDA (personal digital assistant): a palmtop computer that functions as a personal organizer but also provides email and internet access.

Smartphone: a mobile phone that is able to perform many of the functions of a computer, typically having a relatively large screen and operating system capable of running general-purpose applications.

Tablets: a tablet or tablet PC (personal computer) is a portable computer that uses a touchscreen as its primary input device. Most tablets are slightly smaller and weigh less than the average laptop. eg. Apple iPad, Motorola Xoom.

Wi-Fi: a facility allowing computers, smartphones or other devices to connect to the internet or communicate with one another wirelessly within a particular area.
Abstract

The ubiquitous use of mobile technology in today’s society extends to the learning and teaching environment. Most academics in universities encourage its use, aided by libraries offering online resources. Whilst the literature highlights benefits of using mobile technology in learning, particularly for nurses to keep up-to-date, there is limited evidence on such use in clinical settings by graduate nurses in Western Australia (WA). Additionally, there is a lack of information and clarification on the use of such technology in WA hospitals. The purpose of this study was to identify and explore factors influencing the use of mobile technology by newly graduated registered nurses in the clinical area. The location of the study was in Perth, Western Australia. The study sought to answer the following questions: What factors influence nurse graduates use of mobile technology in the clinical setting? To what extent and in what ways do nurse graduates currently use mobile technology in the clinical setting? and What are the perceptions of nurse coordinators, educators and managers of graduate programs regarding mobile technology use in the clinical setting. In order to answer these questions, an explanatory, sequential, mixed method design was used.

Initially, a review was undertaken of existing policy and guidelines, regarding use of mobile technology, from both public and private hospitals. This phase of the study was followed by two major phases: (quantitative and qualitative). As a preparation to the quantitative phase, a survey was developed involving the modified use of the Technology Acceptance Model (TAM2). This model was used as the theoretical framework underpinning the study. The survey was administered online to registered nurse graduates using SurveyMonkey™. Both descriptive and inferential statistics were used to analyse the data. Findings from the data informed the next phase of the study.

Data collection for the qualitative phase of the study, involved synchronous Skype™ online text-based focus group interviews with the graduates. Additionally, nurse coordinators, educators and managers of graduate programs from both public and private hospitals, were invited to complete an online open-ended survey. Thematic analysis was used to analyse the data from this phase of the study. The
findings from both the quantitative and qualitative phases was synthesised to answer the research questions, forming a holistic picture to offer conclusions to the study.

This study is significant, as there appears to be a gap between learning with mobile technology in Universities, and its use in the clinical setting. This problem may be associated with the lack of standardised policies in the use of mobile technology, or from senior nurses’ misperception of its benefits. The results of this study may lead to policies and guidelines being reviewed and implemented by local healthcare agencies, and could lead to review of current mobile technology integration into nursing undergraduate degrees.