LIST OF FIGURES

Figure 1. Shaqour Model for integrating new technologies into pre-service teachers' programs .......................................................................................................................................................... 66

Figure 2. Pedagogical Technological Content Knowledge. The Three Circles, Content, Pedagogy, and Technology, Overlap to Lead to Four More Kinds of Interrelated Knowledge .......................................................................................................................................................... 68

Figure 3. ADDIE Instructional System Design Model .................................................................................................................................................................................. 78

Figure 4. Type of Research – Applied Research .................................................................................................................................................................................. 91

Figure 5. Method of Research – Mixed Method .................................................................................................................................................................................. 92

Figure 6. Research Tools Used for Data Collection .................................................................................................................................................................................. 94

Figure 7. Research Tools Used for Statistical Analysis .................................................................................................................................................................................. 94

Figure 8. The ADDIE Analysis Phase .................................................................................................................................................................................. 103

Figure 9. The ADDIE Design Phase .................................................................................................................................................................................. 110

Figure 10. ICT Based Model – Design Document .................................................................................................................................................................................. 115

Figure 11. The ADDIE Development Phase .................................................................................................................................................................................. 116

Figure 12. The ADDIE Implementation Phase .................................................................................................................................................................................. 119

Figure 13. The ADDIE Evaluation Phase .................................................................................................................................................................................. 120

Figure 14. Research Design – Two Group Post Test Design .................................................................................................................................................................................. 122

Figure 15. No. of ICT Sessions Conducted in a Year .................................................................................................................................................................................. 147

Figure 16. ICT Tools Used by Teacher Educators .................................................................................................................................................................................. 148

Figure 17. Record of References by Teacher Educators .................................................................................................................................................................................. 150

Figure 18. Preparation of a Session Plan .................................................................................................................................................................................. 152

Figure 19. Frequency of Use of ICT .................................................................................................................................................................................. 155

Figure 20. Use of ICT for Active Participation .................................................................................................................................................................................. 156

Figure 21. Role of the Teacher Trainee .................................................................................................................................................................................. 159

Figure 22. Topic wise Mean of Content Test .................................................................................................................................................................................. 163

Figure 23. Comparison of Overall Achievement in Content Test .................................................................................................................................................................................. 164

Figure 24. Preparation by Teacher Educator - Teacher Trainee Feedback .................................................................................................................................................................................. 170

Figure 25. Use of Teaching Aid / ICT Tool - Teacher Trainee Feedback .................................................................................................................................................................................. 171

Figure 26. Management of Session / Activities- Teacher Trainee Feedback .................................................................................................................................................................................. 172
Figure 27. Teacher Educators Role - Teacher Trainee Feedback ............................ 174
Figure 28. Teacher trainees Role - Teacher Trainee Feedback ................................ 175
Figure 29. Use of Collaborative Learning - Teacher Trainee Feedback .................... 176
Figure 30. Use of Assessments - Teacher Trainee Feedback .................................... 177
Figure 31. Overall Impression - Teacher Trainee Feedback .................................... 178
Figure 32. Total Mean of Effectiveness - Teacher Trainee Feedback ............................ 179
Figure 33. Preparation by Teacher Educator – Peer Teacher Educator Feedback 184
Figure 34. Use of Teaching Aid / ICT Tool – Peer Teacher Educator Feedback ... 185
Figure 35. Management of Session / Activities – Peer Teacher Educator Feedback ......................................................................................................................................... 186
Figure 36. Teacher Educators Role – Peer Teacher Educator Feedback .................... 187
Figure 37. Teacher Trainee's Role – Peer Teacher Educator Feedback ..................... 189
Figure 38. Use of Collaborative Learning – Peer Teacher Educator Feedback .... 190
Figure 39. Use of Assessments – Peer Teacher Educator Feedback ............................ 191
Figure 40. Overall Impression – Peer Teacher Educator Feedback ............................ 192
Figure 41. Total Mean of Effectiveness – Peer Teacher Educator Feedback ............ 193
Figure 42. Understandability of Constructivism as Theoretical Base of the Model 199
Figure 43. Understandability of Principles of the ICT Based Model ......................... 200
Figure 44. Learn-ability through Self Evaluation ...................................................... 204
Figure 45. Goal Achievement of ICT Based Model ..................................................... 205
Figure 46. Achievement of Objectives of ICT Based Model ..................................... 207
Figure 47. Appropriate Sequencing of Stages of the ICT Based Model .................... 208
Figure 48. Use of Constructivism in the ICT Based Model ........................................ 209
Figure 49. Follow Procedure of the ICT Based Model .............................................. 211
Figure 50. Use of ICT Based Model by Teacher Trainees ........................................ 214
Figure 51. Use of ICT Based Model by School Teachers .......................................... 215
Figure 52. Usability Quality Components of ICT Based Model ................................ 220
LIST OF APPENDICES

APPENDIX 1 - List of Experts ................................................................. 2778

APPENDIX 2 - Questionnaire – Assessment of Teacher Educator Practice in ICT based Curriculum transaction.................................................. 279

APPENDIX 3 - List of Teacher Educators used to Assess Current Practices in conducting ICT based sessions. ................................................ 284

APPENDIX 4 - ICT Based Model of Curriculum Transaction For Teacher Educators - Resource Guide .............................................................. 287

APPENDIX 5 - Content Test........................................................................ 384

APPENDIX 6 - Marks of Experimental Group Teacher Trainees in Content Test 392

APPENDIX 7 - Marks of Control Group Teacher Trainees in Content Test ....... 395

APPENDIX 8 - Questionnaire – Teacher Trainee Feedback.......................... 398

APPENDIX 9 - Teacher Trainee Feedback Scores of Experimental Group........ 401

APPENDIX 10 - Teacher Trainee Feedback Scores of Control Group............. 405

APPENDIX 11 - List of Peer Teacher Educators ........................................ 409

APPENDIX 12 - Questionnaire – Peer Teacher Educator Feedback ............... 410

APPENDIX 13 - Peer Teacher Educator Feedback Scores ............................. 414

APPENDIX 14 - List of Teacher Educators used to test Usability of ICT based Model of curriculum transaction For Teacher Educators............ 418

APPENDIX 15 - Questionnaire – Usability Of The ICT Based Model Of Curriculum Transaction for Teacher Educators .............................................. 419