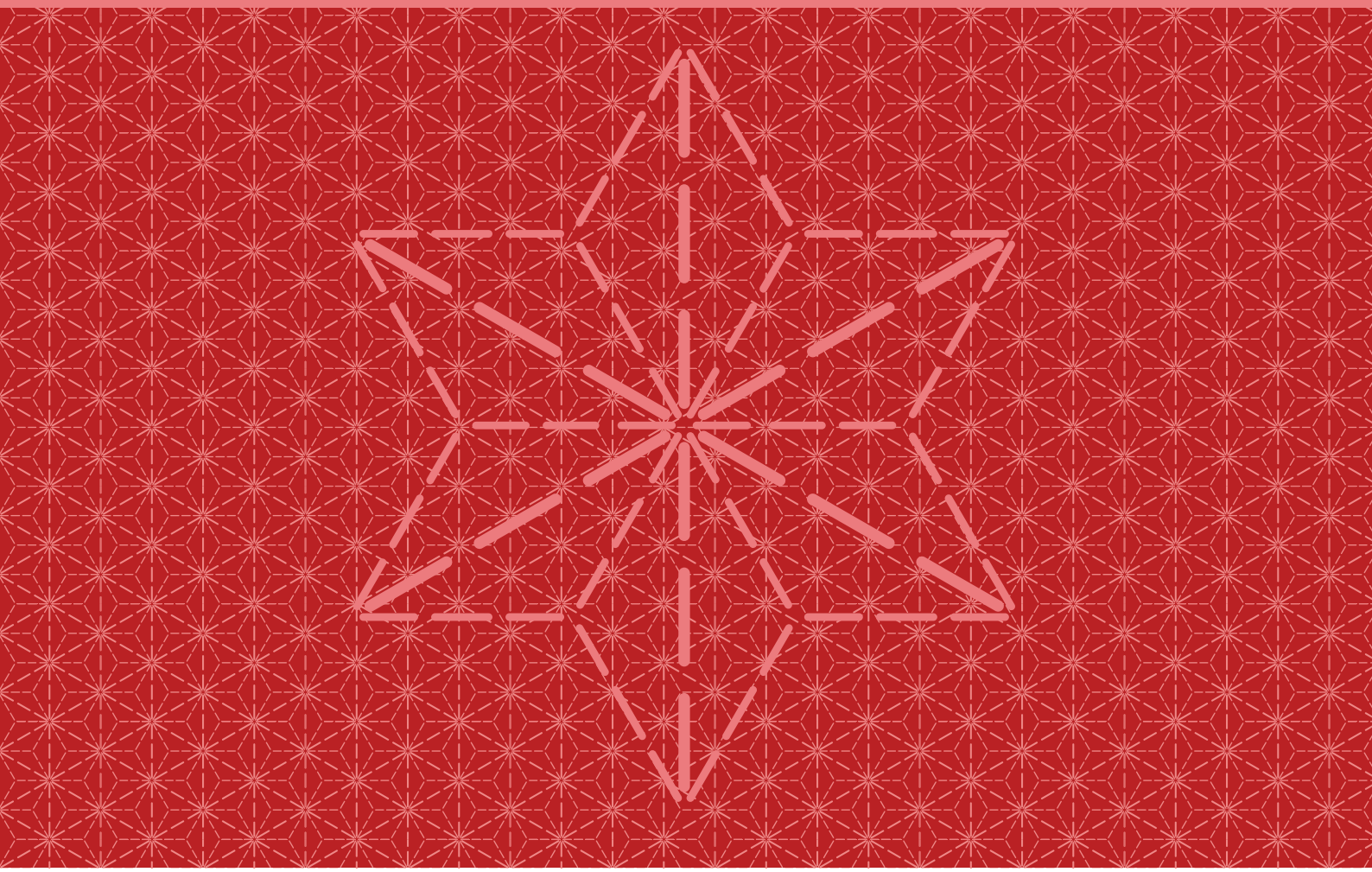
semester 8

Research Project

WINDOWS ON PRACTICE GUIDE

B.Ed. (Hons) Elementary

2012



Higher Education Commission

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Technical Support: Education Development Center (EDC); Teachers College, Columbia University

Higher Education Commission

Foreword

Teacher education in Pakistan is leaping into the future. This updated Scheme of Studies is the latest milestone in a journey that began in earnest in 2006 with the development of a National Curriculum, which was later augmented by the 2008 National Professional Standards for Teachers in Pakistan and the 2010 Curriculum of Education Scheme of Studies. With these foundations in place, the Higher Education Commission (HEC) and the USAID Teacher Education Project engaged faculty across the nation to develop detailed syllabi and course guides for the four-year B.Ed. (Hons) Elementary and two-year Associate Degree in Education (ADE).

The syllabi and course guides have been reviewed by the National Curriculum Review Committee (NCRC) and the syllabi are approved as the updated Scheme of Studies for the ADE and B.Ed. (Hons) Elementary programmes.

As an educator, I am especially inspired by the creativity and engagement of this updated Scheme of Studies. It offers the potential for a seismic change in how we educate our teachers and ultimately our country's youngsters. Colleges and universities that use programmes like these provide their students with the universally valuable tools of critical thinking, hands-on learning, and collaborative study.

I am grateful to all who have contributed to this exciting process; in particular the faculty and staff from universities, colleges, and provincial institutions who gave freely of their time and expertise for the purpose of preparing teachers with the knowledge, skills, and dispositions required for nurturing students in elementary grades. Their contributions to improving the quality of basic education in Pakistan are incalculable. I would also like to thank the distinguished NCRC members, who helped further enrich the curricula by their recommendations. The generous support received from the United States Agency for International Development (USAID) enabled HEC to draw on technical assistance and subject-matter expertise of the scholars at Education Development Center, Inc., and Teachers College, Columbia University. Together, this partnership has produced a vitally important resource for Pakistan.

PROF. DR SOHAIL NAQVI
Executive Director
Higher Education Commission
Islamabad

How the Windows on Practice guide was developed

As part of nationwide reforms to improve the quality of teacher education, the Higher Education Commission (HEC), with technical assistance from the USAID Teacher Education Project, engaged faculty across the nation to develop courses in the new four-year B.Ed. (Hons) Elementary programme.

The process of designing the syllabus for each course in years 3–4 of the programme began with curriculum design workshops. Faculty who will teach the courses were identified by university deans and directors and then invited to attend the workshops. The first workshop included national and international subject matter experts who led a seminar focused on a review and update of subject (content) knowledge. The remainder of this workshop was spent reviewing the HEC Scheme of Studies, organizing course content across the semester, developing detailed unit descriptions, and preparing the course syllabi. Although the course syllabi are designed primarily for Student Teachers taking the course, they are useful resource for teacher educators, too.

Following the initial workshop, participants developed teaching notes, including ideas for teaching units of study and related resources. Faculty worked individually or in groups, focusing on their own preparations to teach, while bearing in mind that their end product must also be useful to those who will teach the course in the future. A series of workshops occurred over the year in order to allow faculty to have protected time for their work, engage in peer review, and receive critical feedback from national and/or international consultants. In designing both the syllabi and the teaching notes, faculty and subject matter experts were guided by the National Professional Standards for Teachers in Pakistan 2009.

All of the syllabi developed by faculty are included in this document along with a listing of topical teaching notes. Additional references and resources appear at the end of the document. These should provide a rich resource for faculty who will teach the course in the future. Sample syllabi with accompanying teaching notes are also included in order to provide new faculty with a model for developing curriculum and planning to teach. This Windows on Practice guide is not intended to provide a complete curriculum with a standard syllabus and fully developed units of study, rather it aims to suggest ideas and resources for faculty to use in their own planning. Hence, readers will find sample units and materials that reflect the perspective of faculty designers rather than prescriptions for practice.

We are respectful of intellectual property rights and have not included any suggested materials that are copyright protected and for which we have not secured explicit permission to use. Therefore, all materials included may be used in classrooms for educational purposes. Materials in this document are not intended for commercial use, however. They may not be used in other publications without securing permission for their use.

Initial drafts were reviewed by the National Curriculum Review Committee (NCRC), and suggestions were incorporated into final drafts, which were then submitted to the NCRC for approval.

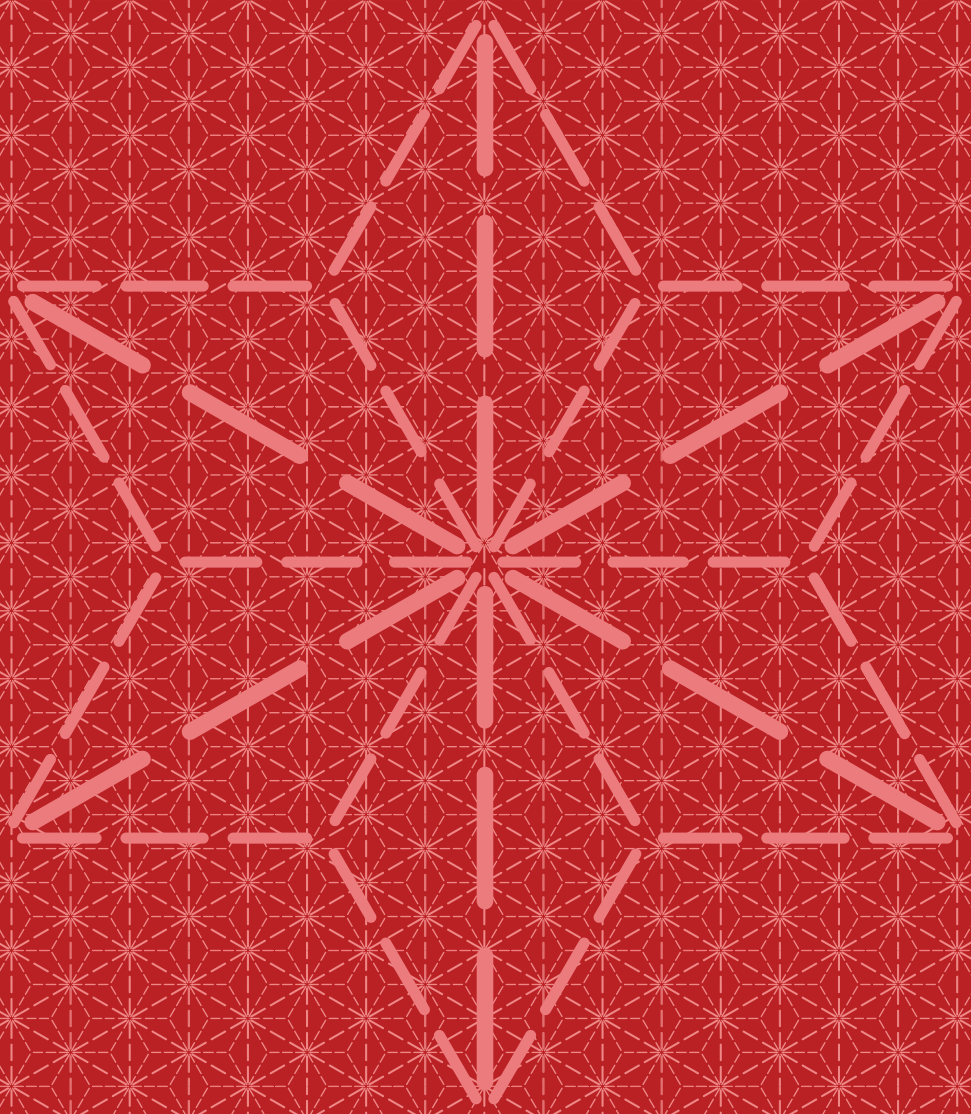
Faculty involved in course design: Dr Allah Noor Khan, Gomal University, D. I. Khan; Dr Arshad Ali, Institution of Educational Research (IER), University of Peshawar, Peshawar; Dr Asaf Niwaz, University of Haripur, Hazara; Asima Idress, Sardar Bahadur Khan Women's University, Quetta; Dr Ayaz Muhammad Khan, University of Education, Lahore; Dr Fazalur Rahman, Allama Iqbal Open University, Islamabad; Dr Hafiz Inamullah, IER, University of Peshawar, Peshawar; Ijaz Ahmad Tatlah, University of Education, Lahore; Intizar Hussain, University of Karachi; Dr Mahr Muhammad Saeed Akhtar, IER, University of the Punjab, Lahore; Dr Mubashrah Jamil, Bahauddin Zakariya University, Multan; Dr Muhammad Ilyas Khan, Hazara University, Hazara; Dr Mussaret Anwar Sheikh, Fatima Jinnah Women University, Rawalpindi; Dr M. Ajmal Chaudhary, Allama Iqbal Open University, Islamabad; Safia Wazir, Sardar Bahadur Khan Women's University, Quetta; and Tarique Bhatti, University of Sindh, Hyderabad.

Subject/content specialist leading the seminar: Dr Bernadette Dean, St Joseph's College for Women, Karachi; and Jamal Papieva, national consultant.

National subject expert leading the course design: Jamal Papieva, national consultant.

Date of NCRC review process: 24–25 April 2013

NCRC Reviewers: Dr Abdul Hameed, University of Management and Technology, Lahore; Dr Fauzia Khurshid, National University of Modern Languages, Islamabad; and Dr Samina Malik, International Islamic University, Islamabad.



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1

Rationale for a course on research projects

In the Higher Education Commission 2010 document 'Curriculum of Education: B.Ed (Hons) 4-year Degree Programme (Elementary & Secondary, Associate Degree in Education, M. Ed./Ms. Education)', the course Research Projects in Education was included as a professional course. This course is designed to prepare B.Ed. (Hons) candidates to be research professionals and to enhance their own professional practice. Student Teachers will undertake independent action research projects throughout the semester under the supervision of university faculty.

2

Course syllabi

RESEARCH PROJECTS

RESEARCH PROJECT

In this section you will find syllabi that have been written by faculty. Using the HEC Scheme of Studies for the course, they considered the balance between the demands of the subject itself, active learning pedagogies, their students, and the particular university milieu in which they work. The syllabi all reflect the same key concepts and broad goals, but they vary in sequence and emphasis.

SYLLABUS 1

By

Asima Idress, Dr Fazalur Rahman, Dr M. Ajmal Chaudhary, and Safia Wazir

Year, semester

Year 4, semester 8

Credit value

3 credits

Prerequisite

Successful completion of semesters 1–7

Course description

The Research Projects in Education course is a practical course in which Student Teachers will be involved in the action research process. The course will enable them to plan, act, observe, and reflect during action research. As the action research process entails an ongoing analysis of data, Student Teachers will be engaged in the same process for their individual projects and will receive guidance from their supervisors. Student Teachers will disseminate their findings in the form of reports.

Course outcomes

At the end of this course, Student Teachers will be able to do the following:

- conduct action research
- review related literature
- use appropriate research methodologies
- construct a research tool and analyse the data
- prepare a project report.

Teaching-learning methodology

An orientation will be provided for Student Teachers. Instructors will supervise Student Teachers using individualized and activity-based methods. A schedule will be provided that outlines meetings with their supervisor. There will be 10 meetings. Each Student Teacher will present a progress report, and the supervisor will give comments, assign further tasks, and provide overall guidance and supervision throughout the action research process.

Meetings timeline

First meeting (week 1)

Each Student Teacher will be assigned a supervisor. During this first meeting, Student Teachers will do the following:

- present their project proposals
- review their project proposals
- receive feedback and suggestions from their supervisor
- be asked to collect relevant literature and develop a research instrument.

Second and third meetings (weeks 2–4)

During these meetings, Student Teachers will do the following:

- present a written progress report to their supervisors for feedback
- present reconnaissance (school, class climate, student profile, and teaching/learning process)
- discuss intervention strategies (e.g. small group work, reading, and activities)
- discuss and finalize the research instrument (e.g. observation sheets, anecdotal records, checklists, interviews, and diaries).

Student Teachers will start their first cycle of action research.

Fourth and fifth meetings (weeks 5–7)

During these meetings, Student Teachers will do the following:

- present collected data that has been coded for analysis
- identify themes, findings, and conclusions
- revise their strategy for the second cycle based on the findings and conclusions drawn.

Student Teachers will start their second cycle of action research.

Sixth and seventh meetings (weeks 8–10)

During these meetings, Student Teachers will do the following:

- share their collected data
- analyse data to draw further findings and conclusions
- revise their strategy for the third cycle (and for implementation in the classroom) based on the findings and conclusions drawn.

Student Teachers will start their third cycle of action research.

Eighth meeting (weeks 11–12)

During this meeting, Student Teachers will do the following:

- discuss on overall collected data and data analysis patterns
- begin data analysis (which will continue for two weeks).

Ninth meeting (weeks 12–13)

During this meeting, Student Teachers will do the following:

- discuss a written project report (dissertation)
- discuss writing their final research report.

Tenth meeting (week 14)

During this meeting, Student Teachers will finalize preparations for the presentation of their action research report in the seminar.

Seminar (weeks 15–16)

During this meeting, Student Teachers will do the following:

- present their project report in a departmental seminar
- submit their final action research report for evaluation

SYLLABUS 2

By

Dr Muhammad Ilyas Khan, Dr Asaf Niwaz, Dr Allah Noor, Dr Hafiz Inamullah, and Dr Arshad Ali

Year, semester

Year 4, semester 8

Credit value

3 credits (16 weeks)

Prerequisite

Successful completion of semesters 1–7

Course description

The Research Projects in Education course is a compulsory part of the four-year B.Ed. (Hons) Elementary programme. The course will involve Student Teachers conducting action research and will be supervised by a tutor. The research will be conducted by each Student Teacher individually, under supervision. The project will culminate with a final report that will be assessed on the basis of 100 marks.

Course objectives

- To sensitize Student Teachers to the issues and problems faced by students in the classroom
- To help Student Teachers critically examine educational issues
- To analyse and review relevant literature
- To use data collection tools and analytical skills
- To act as self-reflective professionals and independent learners
- To develop and perform independent action research projects

Teaching-learning methodology

This is not taught as a traditional course. Rather, Student Teachers and supervisors will be involved in the following activities during the course of the project:

- one-to-one meetings between Student Teachers and supervisors
- seminars
- group discussions and peer review
- presentations

Supervisory process and timeline

There are eight meetings between Student Teachers and their respective supervisors. As there are 16 weeks in the course, meetings will be scheduled with supervisors on certain weeks.

First meeting

Orientation

Second meeting

Discussion, refinement, and finalisation of research proposal

Third meeting

Seminar about development and critical analysis of literature review

Fourth meeting

- Seminar/group discussion on the significance of the research problem
- Discussion on the significance of selected research topics
- Discussion about data collection tools such as interviews, observations, and questionnaires

Fifth meeting

Discussion on fieldwork and the data collection process

Sixth and seventh meetings

- Discussion about data analysis
- Seminar

Eighth meeting

- Final discussion on report writing
- Submit project

Suggested readings

Arnot, M., McIntyre, D., Pedder, D., & Reay, D. (2004). *Consultation in the classroom: Developing dialogue about teaching and learning.* Cambridge, UK: Pearson Publishing.

Cochran-Smith, M. (1994). The power of teacher research in teacher education. In S. Hollingsworth & H. Sockett (Eds.), *Teacher research and educational reform* (pp. 22–51). Chicago: University of Chicago Press.

Denzin, K., & Lincoln, Y. S. (Eds.). (1994). *Handbook of qualitative research.* London: Sage Publications.

Feldman, A. (2007). Validity and quality in action research. *Educational Action Research*, *15*, 5–21.

Lunenberg, M., Ponte, P., & van der Ven, P. H. (2007). Why shouldn't teachers and teacher educators conduct research in their own practices? *European Educational Research Journal*, *6*: 13–24.

Martin, M. (2005). Reflection in teacher education: How can it be supported? *Educational Action Research*, *13*, 525–43.

McNiff, J., Lomax, P., & Whitehead, J. (1996). *You and your action research project.* New York: Routledge.

Ponte, P., (2002). How teachers become action researchers and how teacher educators become their facilitators. *Educational Action Research*, *10*, 399–423.

Ponte, P., Ax, J., & en Beijaard, D. (2004). Don't wait till the cows come home: Action research and initial teacher education in three different countries. *Teachers and Teaching: Theory and Practice*, *20*, 591–621.

SYLLABUS 3

By

Dr Mussaret Anwar Sheikh, Tarique Bhatti, and Intizar Hussain

Year, semester

Year 4, semester 8

Credit value

3 credits

Prerequisite

Successful completion of semesters 1–7

Course description

The research project is based on the research proposal prepared in the Research Methods in Education course in semester 7 of the B.Ed. Hons Elementary programme. In the Research Projects in Education course, the proposal will be put into action and research conducted. Because it is not a traditionally taught course, the course will be in the form of face-to-face meetings with the supervisor, field visits linked with action research, and group discussions. Collaborative meetings for five milestones will be held with the supervisors to address common issues that arise during the action research process.

Learning outcomes

After completion of this course, Student Teachers will be able to do the following:

- identify areas for action research
- develop research questions and research tools
- conduct action research
- identify different styles of referencing, citing, and presenting research work
- choose a relevant and appropriate methodology for research work.

Course outline

The following table can be used for meetings/milestones between Student Teachers and supervisors to keep a record of their work.

Date of meeting (milestone)	Discussion points	Actions to be taken	Possible feedback	Signature of supervisee/ supervisor

Milestone 1 (weeks 1–2)

This meeting will be an initial orientation and introduction to the project. Student Teachers and supervisors will aim to accomplish the following:

- prepare a timeline of the project
- identify the supervisor's role and the supervisee's responsibilities
- plan the meeting schedule
- discuss the schedule of conducting of research
- discuss the meeting form as a record of research process.

Milestone 2 (weeks 3–5)

This meeting will involve a discussion on the steps to take before Student Teachers begin conducting research. Student Teachers and supervisors will aim to accomplish the following:

- discuss getting consent and completing entry negotiations with concerned authorities
- discuss data collection tools
- consider the required data on variables such as the school, school schedule, school facilities, information on the class, the students, the teachers, and family background.

Milestone 3 (weeks 6–9)

In this meeting, Student Teachers and supervisors will aim to accomplish the following:

- discuss points arising from the first research cycle and needed changes in data collection
- follow up on feedback of the first cycle
- discuss ongoing data analysis.

Milestone 4 (weeks 10–13)

This meeting will involve reviewing the changes that have been made after the previous discussion on the first cycle. Student Teachers and supervisors will aim to accomplish the following:

- plan for the second cycle
- review up-to-date written documents on the research process prepared by the Student Teachers.

Milestone 5 (weeks 14–16)

This meeting will involve discussing continued improvements and refinements as well as the ongoing cyclic process. Student Teachers and supervisors will aim to accomplish the following:

- discuss data analysis and the writing process
- present the action research project.

Role of supervisor

The supervisor should provide guidance to Student Teachers completing their research projects by doing the following:

- facilitating project planning
- setting the meeting schedule
- conducting seminars on issues arising out of the research project
- specifying the nature of the seminar so Student Teachers may share their success stories
- monitoring timelines to ensure that the research project is completed in a timely manner
- sharing rubrics for evaluation of the project
- providing guidelines for project presentations
- offering guidelines for publishing and dissemination.

Suggested literature

Creswell, J. W. (2008). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage Publications.

Flower, F. J. (2008). *Survey research methods: Applied social research methods*. Thousand Oaks, CA: Sage Publications.

Marshall, J. C. (2010). *Classroom test construction*. Boston: Addison-Wesley.

McNiff, J., Lomax, P., & Whitehead, J. (1996). *You and your action research project*. New York: Routledge.

Salkind, N. J. (2006). *Exploring research*. New Jersey: Pearson Prentice-Hall.

Wiersma, W. (2000). *Research methods in education*. Boston: Allyn and Bacon.

3

Integrated teaching notes

During the curriculum development process, faculty were encouraged to keep notes that would be useful to them and others who may teach the course in the future. These were submitted along with the course syllabus. Teaching notes include ways to introduce the course, ideas for conducting meetings with Student Teachers, and suggestions for reading and resource materials. These have been integrated into a single section of this document to create a rich and varied collection of easily accessible ideas.

TEACHING NOTES

By Asima Idress, Dr Fazalur Rahman, Dr M. Ajmal Chaudhary, and Safia Wazir

Detailed weekly plan

Week 1: Orientation meeting

Objective
To orient Student Teachers to the research project

In the first week, the Instructor will hold an orientation session with Student Teachers. In this meeting, the Instructor will familiarise Student Teachers with the process of the research project and prepare them for the steps to be completed during the semester.

Weeks 2–3: Reviewing and refining the research proposal

Objectives

- To give feedback on Student Teachers' research proposals
- To assign supervisors to the Student Teachers
- To guide Student Teachers through the next step of their research

In weeks 2 and 3, Student Teachers will work on different sections of their proposals. They will then present their proposals, and their Instructor will offer feedback and suggestions. Instructors will also offer guidance in collecting relevant literature.

Based on the area of study and nature of the research project, Student Teachers will be assigned a project supervisor.

Weeks 4–5: Constructing and finalising the research instrument

Objectives

- To discuss intervention strategies with supervisors
- To construct a research instrument

In weeks 4 and 5, Student Teachers will develop a research instrument, the reliability and validity of which will be examined. Student Teachers will submit their written work to their supervisor for feedback. Supervisors will discuss intervention strategies (such as small group work, reading, and activities) and reconnaissance (school, class climate, student profile, and teaching and learning process) with Student Teachers. Supervisors will also provide feedback and suggestions on an appropriate instrument to collect authentic data (e.g. an observation sheet, anecdotal records, checklists, and interview). The instrument will be finalised during this session.

Weeks 6–7: Conducting action research and applying interventions and research instruments

Objectives

- To discuss using the research instrument to collect the data
- To start the cyclic process of action research

Student Teachers will start the first cycle of their action research in the field. They will work according to the plan they devised with their supervisor.

Weeks 8-9: Analysing collected data

Objectives

- To present collected data to supervisors
- To code items for data analysis

Student Teachers will present their collected data to their supervisors, who will provide feedback. Supervisors will also guide Student Teachers on coding items for data analysis and checking the reliability and validity of data obtained from a given item. Student Teachers will analyse the collected data per instructions from their supervisor.

Weeks 10–11: Revising strategies and drawing conclusions

Objectives

- To draw a conclusion
- To revise strategy
- To share findings with supervisors

After identifying themes, Student Teachers will draw the conclusion and elucidate findings accordingly. On the basis of findings, they will revise their implementation plan and strategy for the second cycle.

Weeks 12–13: Implementing the revised strategy

Objective
To implement the revised strategy in the second cycle.

Engage Student Teachers in the second cycle of action research.

Weeks 14–15: Writing the research report

Objective
To discuss writing the project report.

Supervisors and Student Teachers will discuss writing the research report (dissertation). Student Teachers will then have two weeks to write the report per the supervisor's instruction.

Week 16: Seminar presentation

Objective
To disseminate the action research project.

Student Teachers will present their action research projects in a departmental seminar.

Roles and duties of supervisors and supervisees

Supervisor's role

The supervisor will play the role of a facilitator, which will involve the following:

- helping plan activities
- giving orientation to Student Teachers
- monitoring Student Teachers' work
- providing motivation and giving feedback
- offering guidance to Student Teachers on:
    - finalising the research proposal
    - locating resources for a literature review
    - developing an instrument for data collection
    - organizing and analysing collected data
    - discussing findings and drawing a conclusion
    - writing the report
    - presenting the action research project.

Supervisee's role

As supervisees, Student Teachers will be expected to do the following:

- take initiative and responsibility
- discuss meeting schedules with their supervisor
- complete assigned tasks for each meeting

- take timely feedback from the supervisor and incorporate it as needed
- identify areas that need guidance from their Supervisor
- conduct the project in an ethically appropriate manner
- follow institutional rules and regulations
- submit their research report in a timely manner.

Rubrics for action research project (dissertation)

Level 1: Major changes needed	Level 2: Minor changes needed	Level 3: Conditionally approved	Level 4: Approved
Ambiguous, unclear proposal	Clear statement, but unclear objectives methodology	Clear statement and objective, but methodology needs more clarity	Clearly stated and detailed proposal
Introduction, research objectives, and research questions			
Missing and ambiguous parts	Clear background information but needs more justification	Clear background but needs more detail	Proper background Clear and definite objectives, methodology, and significance of research
Literature review			
Irrelevant literature review Possible plagiarism Not well organized	Relevant literature review, but lacks sequence Literature not up-to-date	Relevant but insufficient literature review	Relevant, well-organized, and up-to-date literature review with sufficient references
Research tools for data collection			
Improper sequencing of questions and formatting Inappropriate research tools for research question(s)	Objectives not addressed by the tools Tools irrelevant to and insufficient for the project	Addressed objectives completely Appropriate but improperly designed research tools for answering research questions	Appropriate number of questions, addressed objectives, and proper sequence and formatting Properly designed research tools that answer research questions

cont.

Level 1: Major changes needed	Level 2: Minor changes needed	Level 3: Conditionally approved	Level 4: Approved
Data analysis and reflection			
Poor data analysis Missing reflection and next steps	Results of the intervention somewhat addressed by reflection	Results of the intervention and next steps somewhat addressed by reflection	Appropriate data analysis Results of the intervention and next steps clearly and thoughtfully addressed by reflection
Recommendations/ discussion			
Recommendations not based on findings Missing discussion	Some recommendations not linked with findings Missing discussion	Recommendations based on findings More elaboration needed on discussion	Recommendations based on findings Conclusion included in discussion
Format and structure			
References seldom cited to support statements	References occasionally provided, but many statements seem unsubstantiated Sources of information unclear	References generally cited to support claims Sources of information clear and fairly represented	Compelling references from reputable sources to support claims Sources of information clear and fairly represented
Many errors that obscure meaning and potentially confuse readers	Many errors that potentially distract readers	Occasional errors, but they do not distract readers	Error-free (or nearly error-free) writing

SYLLABUS AND TEACHING NOTES

By Dr Muhammad Ilyas Khan, Dr Asaf Niwaz, Dr Allah Noor Khan, Dr Hafiz Inamullah, and Dr Arshad Ali

Research project procedure

The Research Projects in Education course is a compulsory part of the four-year B.Ed. (Hons.) Elementary programme. Student Teachers will individually complete the project by conducting action research, which will be supervised by a tutor. The project will culminate in the form of a final report that will carry 100 marks.

Course objectives

- To sensitize Student Teachers to the issues and problems faced by students in the classroom
- To help Student Teachers critically examine educational issues
- To analyse and review relevant literature
- To use data collection tools and analytical skills
- To act as self-reflective professionals and independent learners
- To develop and perform independent action research projects

Teaching-learning methodology

This is not taught as a traditional course. Rather, Student Teachers and supervisors will be involved in the following activities during the course of the project:

- One-to-one meetings between Student Teachers and supervisors
- Seminars
- Group discussions and peer review
- Presentations

Timeline and supervisory process

First (orientation) meeting (week 1)

Supervisors will introduce themselves as well as their academic and research backgrounds to Student Teachers. Similarly, Student Teachers will highlight their own academic and research interests in this initial meeting. Student Teachers will also be given an opportunity to discuss their action research plan, the proposal developed by in the Research Methods in Education course. After learning more about Student Teachers' proposed projects, supervisors may provide initial guidance by suggesting books and other materials for further study.

Second meeting (week 2)

In the second meeting, the supervisor will provide literature review assistance, particularly with regard to directing Student Teachers to relevant materials. The supervisor should also discuss different search methods, such as Google Scholar and other search engines, and potential resources, including free online journals, e-books, and e-theses. Student Teachers will be assigned the task of consulting relevant literature and developing a critical review. With this in mind, supervisors should work with Student Teachers to help them refine and finalize their research plans.

A useful way for Student Teachers to begin their literature review is through an online search for issues or questions related to their topic. Other sources may be found in libraries. Likewise, newspapers and archives could also be useful sources.

While completing their literature reviews, Student Teachers should focus on their research question or topic. This is essential to keep the process under control and to avoid engaging in tangential research that is irrelevant and a potential waste of time and resources.

Third meeting (week 3)

Supervisors should discuss different types of research tools and data collection processes with Student Teachers in this session. Specifically, the supervisor should provide guidance on developing a useful research tool and the pitfalls of the data collection process.

Useful research tools are able to focus on the research question or hypothesis. They may include questionnaires, interviews, and observations, all of which should be thoroughly prepared in light of study objectives and available data and information sources. For instance, sometimes new researchers prepare interview questions that do not serve to answer the research question. Sometimes interviews are selected as data collection tools, but there may be more appropriate data sources or better subjects to interview. Therefore, researchers should have alternative plans to accommodate any such eventualities.

Fourth meeting (week 4)

The supervisor will review Student Teachers' research tools and provide advice (as needed) on revisions or amendments. If a research tool is appropriate, it will be approved for data collection.

Ethical considerations during the data collection process will also be discussed. These are an important component of a valid research process. Ethical considerations include making sure participants' safety, security, and dignity are maintained. This can be done by taking steps to ensure their anonymity and confidentiality. Furthermore, researchers should obtain informed consent from participants regarding the use of data they provide.

Data collection (weeks 5–6)

Student Teachers will collect data during this period. In meetings with their supervisors, they should discuss the data collection process and their initial analyses. Supervisors should help determine if more data collection or more in-depth analysis is needed.

The data analysis process is ongoing, and after every cycle, Student Teachers will revise their previous plan and modify it according to emerged data.

Research seminar/workshop/group discussion (week 7)

Supervisor will conduct a seminar around Student Teachers' experiences during the data collection process. Student Teachers may choose to arrange a follow-up workshop or group discussion to further explore themes covered in the seminar.

Supervisors should be available during this period to discuss any difficulties Student Teachers have encountered during the data collection processes. They may also attend any follow-up sessions among the Student Teachers to learn more about possible issues and problems they are facing and to help them brainstorm solutions.

Continue cyclic procedure (week 8)

Student Teachers will continue the cyclic process of action research after modifying their collection and analysis processes.

Sixth and seventh meetings (weeks 9–10)

In meetings during this period, the supervisor should assess data analysis processes and discuss possible themes emerging from the research process thus far.

Eighth meeting (weeks 11–12)

The meeting during this period will involve fine-tuning the research findings and beginning the writing process.

Report writing is an important aspect of the research process and how the research findings will be disseminated. A research report usually consists of the background, the aims, the methodology adopted for the research process, and the outcomes and findings of the research. The structure and process of report writing depends on the type of research. In a quantitative research project, the report writing is usually completed toward the end of the project. In contrast, in qualitative studies, report writing is usually a continuous and flexible process, as changes are made to the scope, aims, and direction of the research process.

The supervisor should ensure that Student Teachers understand the variations between quantitative and qualitative reports with regard to research theses and papers.

Ninth meeting (week 13)

Student Teachers will submit their research reports to their supervisor.

Tenth meeting (weeks 14–15)

Supervisors will meet with Student Teachers to discuss feedback and revisions for the final draft. Student Teachers will revise their reports accordingly.

Eleventh meeting (week 16)

Student Teachers will submit their final research reports. This should be done on or before the last working day of the semester.

Resources

Online resources

O'Brien, R. (1998). An overview of the methodological approach of action research.

➢ Available from http://www.web.ca/robrien/papers/arfinal.html

Seidel, J. V. (n.d.). Qualitative data analysis.

➢ Available from http://www.scribd.com/doc/7129360/Seidel-1998- Qualitative-Data-Analysis

Book

McNiff, J., Lomax, P., & Whitehead, J. (1996). *You and your action research project.* New York: Routledge.

Journals

Action Research

➢ http://arj.sagepub.com

Educational Action Research

➢ http://www.tandfonline.com/toc/reac20/current

Journal of Action Research

➢ http://research.vancouver.wsu.edu/journal-of-action-research

International Journal of Action Research

➢ http://www.hampp-verlag.de/hampp_e-journals_IJAR.htm

West Virginia Online Action Research Journal

➢ http://www.wvcpd.org/PLAJournal/index.html

TEACHING NOTES

By Dr Mussaret Anwar Sheikh, Tarique Bhatti, and Intizar Hussain

Guidelines for research project

Supervisors should provide guidance about the nature of research, the standard expected, planning research, presenting the research proposal, literature research, and appropriate courses to attend.

Early supervision stage

In initial meetings, the supervisor should help Student Teachers identify research project aims. These meetings should also focus on the demands of the proposed research topic and the feasibility of the research topics and approach. (Early identification of potential areas of concern can often prevent major problems at a later stage.)

The early stage meetings should consider the following:

- the development of the research question
- the scope of and approach to the literature review
- specific research skills, methodological approaches, and techniques to be developed
- procedures for obtaining ethics approvals (e.g. getting a support letter from a supervisor for field visits, seeking an appointment from the school authorities, apprising the authorities about the research project, getting consent from subjects)
- a broad timeline with general milestones and key deliverables.

Supervision protocols

- Discussions with Student Teachers on the project and finalizing the field visit
- Discussions on the project plan and deadline
- Mutual discussions on the requirements for the project
- Fieldwork protocols
- Regular meetings with the supervisor for briefing/feedback on research performed in the field

The role and duties of the supervisor

The supervisor should provide guidance to Student Teachers completing their research projects by doing the following:

- ensuring that they are familiar with university policies, regulations, and schedules
- explaining the research student supervisory policy and necessary record-keeping (The signed supervisor student agreement form outlines expectations and timeframes and should be used as a guide to maintain a productive relationship between supervisors and Student Teachers.)
- facilitating project planning
- setting the meeting schedule
- conducting seminars on issues arising out of the research project
- specifying the nature of the seminar so Student Teachers may share their success stories
- monitoring timelines to ensure that the research project is completed in a timely manner
- sharing rubrics for evaluation of the project
- providing guidelines for project presentations
- offering guidelines for publishing and dissemination.

Other means of communication (optional)

Supervisor may communicate with Student Teachers outside of meetings via email, video calls, or telephone, especially if face-to-face meetings cannot be arranged. In such cases, it is essential that supervisors schedule the time and medium of communication. This will ensure that the meeting is as productive as a face-to-face meeting for both parties.

Rubrics for evaluating action research projects

	Below average	Average	Above average
Introduction	The introduction does not engage the reader. The introduction does not establish the context and/or purpose of the study.	The introduction does not engage the reader. The introduction establishes the context and/or purpose of the study, but it is not clearly written.	The introduction engages the reader. The introduction establishes the context and/or purpose of the study and is clearly written.
Research question	The proposed research question is difficult to investigate.	The proposed research question can be investigated.	The proposed research question provides clear direction for investigation.
Literature review	The literature review is unclear and unrelated to the research question.	The literature review is clear and addresses the research question.	The literature review is very clear and addresses the research question. The literature review includes primary sources.
Description of intervention/action (methodology)	The planned intervention is not appropriate.	The planned intervention is somewhat appropriate, but not effective.	The planned intervention is appropriate and effective.
Results	The results are not clearly stated.	The results are stated but not organized or systematically presented.	The results are well written and systematically and clearly presented.
Implications	The implications are not justified.	The implications are realistic.	The implications are very realistic and cover a wide range of potentialities.
References (APA style)	The references are not well written.	The references use mostly APA style.	The reference use APA style. APA style is used consistently throughout.
Grammar/language	Language mistakes are frequent.	Language use is average throughout the draft.	Language is error free with respect to grammar and sentence structure.

SYLLABUS AND TEACHING NOTES

By Dr Mubashrah Jamil, Dr Mahr Muhammad Saeed Akhtar,
Dr Ayaz Muhammad Khan, and Ijaz Ahmad Tatlah

Course description

Action research is a component of reflective practice and professional learning grounded in an ethical commitment to improve practice and actualize educational values. This course will involve Student Teachers completing an action research project. They will design and conduct action research projects to better understand and improve teacher behaviours, learning outcomes, schools, curriculum, professional practice, and the democratic principles of education.

Learning outcomes

Action research is a powerful tool that enables classroom and active teachers to improve the teaching and learning process by systematically and carefully examining their own educational practices. Therefore, the primary goal of this course is to develop interest among the prospective primary teachers to observe, understand, evaluate, and then critically reflect on their own teaching practices. This will ultimately improve their professional practices.

At the end of this course, Student Teachers will be able to:

- identify existing teaching or learning problems within the classroom
- collect related material or information about the identified problem(s)
- plan to solve the identified problem
- implement a plan according to their proposal
- evaluate their results regardless of the identified problem has been solved
- write and disseminate their action research project through a report.

Course structure

This course is not dependent on routine lectures and classroom activities. Rather, it involves full-time practical work or fieldwork independently performed by Student Teachers with guidance from supervisors.

Meetings between Student Teachers and supervisors should be scheduled. For all meetings, an agenda should be shared and discussed before each meeting via email or on the telephone. It may be easiest for supervisors to prepare and distribute schedules for meetings and seminars before the semester begins. Note that there should be two seminars scheduled: one in which Student Teachers will present their research proposals and one in which they will present their final action research projects. Rubrics should be used to assess Students Teachers' progress at the end of each meeting.

The roles of a supervisor in action research

The supervisor will enable the supervisee to:

- clearly understand the nature of action research
- understand and willingly follow the ethics of research
- understand and select the research problem and its dimensions
- critically review the literature
- analyse the research problem
- select the appropriate method(s).

The supervisor will:

- monitor the research process
- provide full cooperation and guidance during the study
- provide technical support for data analysis and report writing
- review the draft and provide feedback in preparation of the final draft
- address issues as they emerge.

Course schedule

The process of the action research project is described below. The supervisor will arrange meetings with Student Teachers every two weeks to monitor and guide the progress of their work. The supervisor can also visit the designated research site and observe one or more interventions to see whether the Student Teacher is on the right track.

Week 1: Research proposal seminar

Student Teachers will present their proposal. After the presentations, they should incorporate feedback from their supervisor.

Week 2: Ethical considerations and entry negotiations

Student Teachers must obtain approval from the institutional ethics authority. They must also negotiate with schools and participants to get approval for observations and interviews.

Week 3: Research proposal

Supervisors will review Student Teachers' proposals.

Student Teachers will make arrangements and prepare for their intervention.

Week 4: Cycle 1

Student Teachers will perform reconnaissance. They should conduct a situational analysis. This is the first step in action research that involves going beyond the obvious problem to try to understand why the problem appears the way that it does.

Week 5: Intervention

Student Teachers will begin to implement their general plan and then monitor the implementation and its effects.

Week 6: Ongoing analysis and reflection

Student Teachers will analyse data and reflect on the research they have completed. They will also review their initial plan.

Week 7: Cycle 2

Student Teachers will make necessary changes to their initial plan based on analysed data.

Week 8: Actions to take

Student Teachers will implement action steps for cycle 2. They will then monitor implementation and its effects.

Week 9: Ongoing analysis and reflection

Student Teachers will analyse data and reflect on the research they have completed. They will also review their revised plan.

Week 10: Cycle 3

Student Teachers will make additional changes to their plan based on analysed data to prepare for implementation of action in cycle 3.

Week 11: Actions to take

Student Teachers will implement action steps for cycle 3 and then they will monitor implementation and its effects.

Week 12: Ongoing analysis and reflection

Student Teachers will analyse action steps of the cycle.

Week 13: Data analysis

Student Teachers will bring all data and previous analysis together and analyse as a whole. They will need to explain any failures or successes in detail.

Week 14: Conclusion

Student Teachers will write their recommendations, the related implications, and their overall conclusion.

Weeks 14–15: Dissertation/thesis

Student Teachers will write their action research project report.

Week 16: Presentation

Student Teachers will present their action research projects in a departmental seminar.

Rubrics for dissertation evaluation

Quality indicators	Strongly agree	Agree	Disagree	Strongly disagree
Chapter 1: Introduction				
Introduction to the study clearly states the problem and demonstrates how the topic is significant to the area of study and professional organization.				
Introduction situates specific problem within a broader context.				
The research questions are stated clearly.				
Assumptions, limitations, and boundaries of the study are clearly stated.				
Chapter 2: Review of literature				
Coverage of the literature is adequate and within the scope of the problem.				
Literature review is well organized around major ideas or themes.				
The content of the review is drawn from the most relevant published knowledge and current research on the topic under investigation.				
Scholarly sources, such as books, peer-reviewed journals, or other materials appropriate to the issue or problem, have been chosen for study.				
The relationship between the problem and previous research is clear.				
Chapter 3: Research methodology				
The research design is appropriate and described fully.				
Population, sample, criteria for selecting sample/participants, and access to subjects/ participants are appropriate and described in adequate detail.				
Action research cycles are explained in detail.				
Data-gathering methods and procedures are appropriate and clearly described.				
Description of instrumentation or data collection tools is present.				
Measures for ethical protections and rights of participants are adequate.				
Data analysis methods and procedures are clearly described.				

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Resources

Some resource materials are provided below that may be helpful for Student Teachers during the implementation of their action research project.

Dissertation sections

- Abstract
- Acknowledgment
- Chapter 1: Introduction
  - Context of the study
  - Statement of problem
  - Purpose and significance of the study
  - Research questions
- Chapter 2: Literature review
- Chapter 3: Research methodology
  - Research design
  - Setting of the study and entry negotiations
  - Sampling procedure and research sample
  - Data collection methods
  - Data analysis procedure
  - Ethical considerations
  - Challenges
- Chapter 4: Data analysis and discussion
- Chapter 5: Conclusion
  - Recommendations and implications
  - Summary
- References
- Appendices

Critical friend

Learning is a life-long process and every learner can be supported by a critical friend. The role and significance of a critical friend becomes very important while doing research and can be underscored when doing action research.

Grundy (1995) promotes involving a critical friend in action research. The critical friend is involved not only during questioning, assumptions, and interpretations, but also in supporting and collaborating. It needs to be emphasized that a 'critical friend' is needed, not an 'enemy'. Mutual respect and a desire to support each other are essential for both peers. The critical friend is one whom we trust and whose work is also open to scrutiny. This point reminds us of the collaborative nature of action research.

It is useful to have an objective observer assist in the observation. This critical friend can provide an unbiased look at your classroom situation and uncover information you may have missed. He or she helps you reflect on your evidence and focuses on your plan without giving you answers. When you work with a critical friend, you need to clarify how you will work together, because a critical friend relationship requires real commitment.

A helpful critical friend will pose questions, not 'one-up' you by telling of his or her own similar experiences. Despite the name, a critical friend does not criticize to the point of forcing you to defend your actions. A critical friend is not there to offer solutions to your problems, but to listen to your solutions. He or she should ask you for concrete examples and then for the reasons and motives for your actions. A critical friend will help you broaden your thinking by asking if there are other factors you have not considered.

From: Nugent, G., Malik, S., & Hollingsworth, S., (2012). *A practical guide to action research for literacy educators.* Washington DC: International Reading Association.
➢ Available from http://www.reading.org/Libraries/international/a-practical-guide-to-action-research-for-literacy-educators.pdf

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Banks, J. A., & Banks, C. A. (Eds.), (2004). *Handbook of Research on Multicultural Education*. San Francisco: Jossey-Bass.

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Gay, L. R., & Mills, G. E. (2009). *Educational research: Competencies for analysis and application*. Upper Saddle River, NJ: Pearson.

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Lewins, A., Taylor, C., & Gibbs, G. (2005). *What is qualitative data analysis?* School of Human & Health Sciences, University of Huddersfield. United Kingdom.

➢ http://onlineqda.hud.ac.uk/Intro_QDA/what_is_qda.php

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➢ http://www.reading.org/Libraries/international/a-practical-guide-to-action-research-for-literacy-educators.pdf

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Rudner, L. M., & Schafer, W. D. (1999). *How to write a scholarly research report. Practical Assessment, Research & Evaluation, 6.* Available from:

➢ http://www.uic.edu/depts/educ/mesalab/MESA%20Downloads/Writing%20Resources/WriteScholarlyResearch.pdf

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