WKU Educational Leadership Doctoral Program

Dissertation in Practice

Quality Rubric

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Chapter 1 Quality Rubric: Statement of the Problem

This tool is designed to help WKU EdD students, course instructors, and chairs/committee members understand the features of a high-quality Chapter 1 as it appears in WKU improvement science dissertations in practice. Chapter 1 articulates the problem of practice that will be the focus of the improvement science study. This tool should be used in conjunction with the dissertation-in-practice framework found in Appendix A of the *WKU EdD Student Handbook*, the *WKU EdD Writing Rubric*, and relevant improvement science sources like Chapter 3, "Actionable Problems of Practice," in *The Improvement Science Dissertation-in-Practice: A Guide for Faculty, Committee Members, and Their Students* (Perry et al., 2020), and Chapter 3, "Collaborating to Define Problems" in *Improvement Science in Education: A Primer* (Hinnant-Crawford, 2020).

Chapter element	Proficient	Developing	Unacceptable
Introduction to the problem *-the overarching problem-*	States the overarching problem and makes a compelling case that this problem is indeed endemic for practitioners in a broad educational context (K-12, higher education, public service sector, health care, etc.; see Perry et al., p. 54, for the difference between overarching problem areas and the local problem – the intro should address the overarching problem for educators broadly).	States an overarching problem but the case that this problem is endemic for practitioners in a broad context needs to be strengthened.	It is not clear that what is being described is truly an overarching problem impacting educators in a broad educational context. The problem being described may only be local in nature and not representative of a broader problem for the field.
-evidence of the ubiquity and relevance of the overarching problem-	Presents evidence in the form of data and literature from practitioners and scholars that this problem interferes with educational organizations accomplishing their core mission (examples: reading and math proficiency, graduation	More sources and evidence are needed to make a convincing case that the stated problem interferes with educational organizations accomplishing their core mission.	The statement of the problem is not supported by data or scholarly or practitioner sources.

	rates, college/career readiness, etc.).		
-clarity of the problem from any possible solutions-	The statement of the overarching problem does not refer to possible solutions or imply that the solution to this problem is already known.	There may be some evidence of confusion of the problem and potential solutions.	The statement of the problem is a proposed intervention or solution.
The problem of practice in context *-the local problem-*	Describes how this overarching problem for the broader field appears *within the student's chosen professional context of study*. Describes in broad terms the general characteristics of the context (an individual school, university, hospital, business, or unit within such an organization). Explains how the problem currently figures as a prominent, vexing, long-term challenge to organizational success, using institutional data as appropriate.	Description may need some additional data, evidence, or argumentation to explain how the problem currently figures as a prominent, vexing, long-term challenge to organizational success, using institutional data as appropriate.	Fails to provide evidence that the stated problem figures as a prominent, vexing, long-term challenge to organizational success. Statement of the local problem may be a restatement of the broader, overarching problem.
-the student's role/positionality in context-	Describes the student's role or position within the organization and how they experience the problem first-hand.	Describes the student's role or position within the organization but may need to explain why the stated problem is relevant to their role.	Fails to describe the student's role or relevance of the problem to their position.
-"users" of the local problem-	Makes a case for why various "users" of the problem within the organizational context experience the issue as an	Describes "users" of the local problem but may need to make a stronger case for how users actually experience the	Fails to identify "users" of the local problem.

	obstacle to organizational success (see Hinnant-Crawford, p. 45; examples: students, parents, faculty members, staff members, administrators, business leaders, etc.).	problem as an obstacle to the organization accomplishing its mission.	
-variation in the local problem-	Describes "variation" in the way users experience the local problem (see Hinnant-Crawford, Ch. 4). For example, does this problem seem to have a disparate impact on freshmen students, first-generation students, students from low socio-economic backgrounds, etc.)?	Student may still be trying to identify variation in users' experience of the problem that root cause analysis may further illuminate.	Does not describe variation in how users experience the local problem.
-actionable nature of the local problem-	The local problem described should be actionable, reflecting something over which the student in their role has some influence to impact.	There may be some lack of clarity about how the stated problem is actionable within the student's role. This too may be further illuminated during root cause analysis.	The problem described is something over which the student has little to no ability to influence.
Purpose of the study	A brief statement that explains that this study will use improvement science to examine how _____ (x problem) can be improved in _____ (x context).	Purpose of the study may not explicitly reference improvement science.	Purpose of study is unclear to the reader as written.
Research question(s)	States a research question that directly addresses the problem of practice through the	Further connections needed between the problem and	No research question presented or RQ is not clearly

	application of improvement science. Examples: "How can we use improvement science to improve kindergarten readiness among preschoolers at Preschool X?" "How can we use improvement science to improve second-year retention at University X?" "How can we use improvement science with health educators to promote positive health changes in diabetes patients at Hospital X?"	application of improvement science.	connected to the stated problem.
Overview of research methods used	Describes the various quantitative and qualitative methods used in this particular study.	Describes the typical kinds of methods used in improvement science.	Does not describe anticipated or utilized research methods or does so inaccurately.
Conceptual framework: Improvement science	Describes the improvement science process (identification of a problem, collaborative root cause analysis to understand the sources of the problem in the local context, and the deployment of iterative cycles of interventions – plan, do, study, act – to gather data to assess the impact of the interventions and directions for subsequent intervention efforts. Cites appropriate sources in this description, for example, Perry et al., Hinnant-Crawford, Bryk et al., Mintrop,	Key components of the improvement science process are not described or the appropriateness of improvement science to address this problem of practice needs to be strengthened.	Fails to accurately describe the improvement science process.

	Langley et al., etc.). Briefly describes why improvement science is an appropriate method for examining this problem of practice in this particular context.		
Conceptual framework: Leadership theory	Describes the key features of a leadership theory that will inform the design of this improvement science study, citing appropriate primary authors. For most students, adaptive leadership will figure prominently here, but other leadership theories may be appropriate (examples: followership, leader-member exchange, transformational, etc.). Clearly makes a case for how this leadership theory applies to and enhances the effort to carry out improvement science in this particular context.	Description of leadership theory may need some additional sources or citations.	Fails to describe (or accurately describe) a leadership theory applicable to this study.
OPTIONAL: Conceptual framework: Other theories	Describes features of any other theories that might be relevant to this study and why they are relevant, citing appropriate primary source authors. (Examples: Bandura's self-efficacy theory, Dweck's mindset's theory, Drago-Severson's adult learning theory, etc.).	Description of other theories may need some additional sources or citations.	N/A

Significance of Study	Describes why this study makes an important contribution to the field of practice and to empirical research. Answers the question: why should similarly situated practitioners read this completed study?	Case for the study's significance could be further strengthened.	Fails to make a case for the significance of the study.
Limitations/delimitations	Explains that improvement science studies are not intended to be generalizable but makes the case for the relevance and importance of contextualized research. Within that context, accurately articulates the limitations and delimitations of the study.	Accurately describes limitations and delimitations but may need to strengthen that discussion relevant to the purposes of improvement science.	Fails to articulate limitations/delimitations or does so inaccurately.
Definitions/glossary of terms	Describes terms that may need to be operationalized for purposes of the study, and which may be unfamiliar to readers without specific expertise in the subject.	Definitions may need further development based on additional study of the literature or clarification during root cause analysis.	Does not include definitions of terms

Chapter 2 Quality Rubric: The Root Cause Analysis

This tool is designed to help WKU EdD students, course instructors, and chairs/committee members understand the features of a high-quality Chapter 2 as it appears in WKU improvement science dissertations in practice. Chapter 2 describes the root cause analysis study that helped the student better understand the root causes of the problem of practice in their context and informed the interventions described in Chapters 3 and 4 of the dissertation-in-practice. This tool should be used in conjunction with the dissertation-in-practice framework found in Appendix A of the *WKU EdD Student Handbook*, the *WKU EdD Writing Rubric*, and relevant improvement science sources like Chapter 4 and 5 in *Improvement Science in Education: A Primer* (Hinnant-Crawford, 2020).

Chapter element	Proficient	Developing	Unacceptable
Introduction	Briefly but accurately describes the purpose of the root cause analysis in improvement science, citing appropriate sources, and why the root cause analysis was important to understanding the problem of practice described in the present study.	Intro may need to be strengthened in terms of more thoroughly or accurately describing the root cause analysis process, citing appropriate sources, or thoughtfully connecting the process to the problem of practice featured in the present study.	No introduction; or the introduction fails to accurately describe the root cause analysis process; or the present study is not referenced or connected to the description of the process.
Root cause analysis literature review *-description of lit review process-*	Thoroughly and accurately explains how the literature review was conducted, including relevant search terms and how the search was further refined based on the results.	Informed readers can tell that search terms may need more refinement or that there is relevant literature not included in the chapter.	The literature review process reveals errors in technique or omission of obviously relevant search terms.
-quality and accuracy of lit review process-	Search terms described are accurate and appropriate to the overarching problem of practice described in Chapter 1 and focus exclusively on what researchers and practitioners have discovered about the root	There may be some evidence that some of the literature described focuses more heavily on interventions/solutions to the problem than root causes. *May neglect relevant leadership literature.*	Literature reviewed does not address root causes of the problem of practice described in Chapter 1 and/or does not address relevant leadership literature.

	causes of the overarching problem. *Includes relevant literature related to leadership theory or practice.*		
-organization by root cause categories-	Subsections of the literature review are organized according to the root causes studied or discovered by the various sources cited.	Subsections may need refinement to more accurately or logically group sources according to root causes.	The literature review is poorly or incoherently organized.
-depth of description-	Literature is described in sufficient depth that the reader can understand how the researcher(s) came to their conclusions about the root cause under investigation.	More explication is needed to help the reader see the relevance of some studies described or how the authors came to their conclusions.	The techniques and findings of the studies described are unclear.
-lit review summary-	The literature review concludes with a summary of the various root causes of the overarching problem as revealed by the literature.	Improvements are needed to clearly and accurately synthesize the findings of previous literature.	There is no synthesis of the findings; or the synthesis appears to be inaccurate to the findings.
Root cause analysis methods *-restatement of the RQ(s)-*	Restates the guiding research question for the study, relating them clearly to the local problem under investigation.		Methods are not connected back to the research question.
-setting and RCA visual tools-	Briefly describes the setting of the research with a focus on root causes discovered by the literature that may be relevant to the context. Includes a fishbone diagram, 5 Why's	May require additional explanation of why the root causes under investigation are grounded in literature and are appropriate for the study and/or problem of practice. Visual	Root causes described are not clearly connected to literature, the problem of practice, or relevant to the context.

	protocol, or other tools that were used to organize possible root causes that will be further explored within the context based on the literature reviewed. Such visual elements accurately reflect the literature and are worded to make it clear how each cause may contribute to the problem.	elements need better alignment with the literature.	
-leadership-related root causes-	Considers root causes that may be related to leadership theory, research, or practice	May need to strengthen the considerations of leadership theory, research, or practice to the root causes.	No consideration of leadership dimensions of the root causes.
-justification of root causes chosen for analysis-	A narrative description of visual tools describes which of the root causes were chosen for further investigation within the context of the root cause analysis study, and why. For example, students might exclude root causes revealed in the literature that are obviously not relevant for their context, or over which stakeholders have limited control.	More explanation is needed to show why the root causes chosen for further investigation are appropriate for the study.	
-participants-	Describes the participants for the root cause analysis study. Participants should be purposively chosen to represent the relevant "users"	More explanation of why participants were chosen, and/or how access to participants was ethically obtained, is needed.	There is no coherent explanation for why participants were chosen or how access was ethically obtained.

	of the problem. Describes how the researcher obtained access to these participants and secured their voluntary involvement. Describes IRB approval process for obtaining informed consent.		
-pre-existing data-	Describes relevant pre-existing institutional data sources that were reviewed for evidence of root causes of the local problem.	More rationale for the use of pre-existing data is required, or relevant institutional data has been overlooked.	There is no effort to utilize existing institutional data or institutional data chosen is not appropriate for the study.
-instrument description-	Describes the instruments used to conduct the root cause analysis. Instruments should reflect both quantitative and qualitative methods appropriate to the context and problem of practice. Describes the design of each instrument, supported by relevant literature. Narrative describes how each instrument or item(s) of the instrument address the various root causes under investigation. For pre-existing instruments, describes relevant research literature that previously utilized the instrument and reliability and/or validity of the instrument, if appropriate.	Needs a stronger rationale for instruments chosen, or how each instrument relates to the root causes under investigation. May need more balance between quantitative and qualitative methods.	No rationale provided for instruments chosen; or instruments are not appropriate for the problem of practice or the root causes under investigation.

-planned data analysis techniques-	Describes intended method of analyzing the results of each instrument, supported by relevant literature. Analysis methods are appropriate for the instrument.	Needs a more justification for the analysis methods chosen and their appropriateness for the instrument.	No analysis plan offered or analysis plan is inaccurate for the instrument/method.
-IRB process-	Describes IRB approval process for all instruments.	Nees a more thoroughly description of the IRB approval process.	IRB approval process note addressed.
Root cause analysis results *-summary of quantitative methods and findings-*	Describes results from quantitative instruments. Summarizes the quantitative findings, accurately describes specific quantitative findings that illuminate relevant root causes and possible solutions to the local problem.	Description of the quantitative results needs more explication to accurately describe findings or connect findings more clearly to relevant root causes and possible solutions to the local problem.	Description of quantitative results is inaccurate and/or incomplete. Results do not illuminate root causes or solutions for the local problem.
-summary of qualitative methods and findings-	Describes results from qualitative methods. Summarizes the qualitative data analysis process and accurately describes themes and findings from each qualitative protocol that address relevant root causes and possible solutions for the local problem. Addresses how triangulation was achieved and how trustworthiness of the findings was ensured.	Description of the qualitative results needs more explication to accurately describe the data analysis process and/or themes and findings and to connect findings more clearly to relevant root causes and solutions to the local problem. Narrative may not fully or accurately describe triangulation and trustworthiness.	Description of qualitative results is inaccurate and/or incomplete. Results do not illuminate root causes or solutions for the local problem. Triangulation and trustworthiness are not addressed.

-synthesis of quantitative and qualitative results-	Synthesizes the combination of quantitative and qualitative results to thoroughly and accurately described the root causes and possible solutions identified that are relevant to the local problem.	Results need more synthesis and/or stronger connection to the root causes and possible solutions relevant to the local problem.	Results are not synthesized and/or do not clearly or accurately convey root causes and possible solutions relevant to the local problem.
Root cause analysis limitations	Accurately describes limitations to the root cause analysis design or results.	Limitations require more explication.	Limitations have not been identified or are inaccurately presented and/or obvious limitations are omitted.
Conclusions and recommendations for interventions	Accurately draws conclusions from the root cause analysis in terms of implications for interventions, connecting to appropriate literature when relevant.	Stronger linkages between the findings and implications for interventions are required.	There are no clear linkages between the root cause analysis findings and possible interventions.

Chapter 3 Quality Rubric: The First Intervention

This tool is designed to help WKU EdD students, course instructors, and chairs/committee members understand the features of a high-quality Chapter 3 as it appears in WKU improvement science dissertations in practice. Chapter 3 describes the first intervention cycle the student deployed to address the problem of practice that provided the basis of the improvement science study. This tool should be used in conjunction with the dissertation-in-practice framework found in Appendix A of the *WKU EdD Student Handbook*, the *WKU EdD Writing Rubric*, and relevant improvement science sources like Chapters 5-6 of Perry et al. (2020) and Chapters 6-8 of Hinnant-Crawford (2020).

Chapter element	Proficient	Developing	Unacceptable
Introduction *-overview-*	Briefly but accurately describes the purpose of the first intervention phase in improvement science, citing appropriate sources, and previews the structure of this chapter.	Intro may need to be strengthened in terms of more thoroughly or accurately describing the intervention process, citing appropriate sources, and/or previewing the structure of the chapter.	No introduction; or the introduction fails to accurately describe the intervention process; or the described intervention is not connected to the root cause analysis findings.
-linkage between this intervention and the root cause analysis-	Briefly and accurately summarizes the intervention deployed in this chapter and why it was appropriate based on the findings of the root cause analysis described in Chapter 2.	Intervention description needs to be strengthened and/or more clearly connected to the root causes identified in Chapter 2.	
Setting/Context	Briefly and accurately recaps the setting of this study as described in Chapters 1 and 2 and the problem of practice under investigation.	Recap of the setting and problem of practice needs clarity or further description.	No effort to remind the reader of the setting or problem of practice.
Intervention Design *-intervention literature review-*	Accurately describes scholarly and practitioner literature related to various interventions that have shown promise for	Informed readers can tell that search terms may need more refinement or that there is relevant literature not included in the chapter.	Literature review presents a haphazard set of literature that may not clearly relate to relevant interventions or the problem of practice.

	impacting the overarching problem of practice.		
-case for this intervention over others-	Based on this literature review, describes which interventions were considered for this improvement science study, and makes a compelling case for why the intervention described in this chapter was selected over others, connecting the planned intervention to relevant contextual factors and root causes of the local problem identified in Chapter 2.	The case for why this intervention was chosen over others based on the literature and root cause analysis findings needs to be strengthened.	The chosen intervention is disconnected from the findings of root cause analysis.
-theory of action-	Describes a theory of action that clearly articulates why the planned intervention is expected to impact the problem of practice, citing relevant literature, and presented with a graphic tool such as a driver diagram, logic model, or other visual representation.	Theory of action and related tools do not fully or clearly explain why the identified intervention is expected to impact the problem of practice.	No theory of action presented, or the theory of action fails to convey an understanding of how the proposed intervention should impact the problem of practice.
-PDSA-	Presents a Plan-Do-Study-Act graphic clearly and accurately illustrating the intervention design.	Plan-Do-Study-Act graphic does not accurately or completely illustrate the intervention design.	No PDSA graphic included or the PDSA graphic fails to present a coherent intervention design.
Research Design	Restates the improvement science research question and briefly and accurately describes	More linkage between the RQ and the proposed intervention is needed.	No restatement of the RQ.

-research question and the intervention-	how the proposed intervention addressed the RQ.		
-goals/purpose of the intervention-	Briefly, clearly, and accurately summarizes the goals and purpose of the intervention.	Description of the goals and purpose of the intervention needs more explication.	Description of goals and purpose of the intervention is unclear.
-participants-	Describes the participants for the first intervention. Participants should be purposively chosen to represent the relevant "users" of the problem. Describes how the researcher obtained access to these participants and secured their voluntary involvement. Describes IRB approval process for obtaining informed consent.	More explanation of why participants were chosen, and/or how access to participants was ethically obtained, is needed.	There is no coherent explanation for why participants were chosen or how access was ethically obtained.
-instruments and data sources description-	Describes the instruments and/or data sources used to measure the impact of the intervention. Instruments should reflect both quantitative and qualitative methods appropriate to the context, problem of practice, and intervention. Describes the design of each instrument, supported by relevant literature. Narrative describes how each instrument or item(s) of the instrument address the various	Needs a stronger rationale for instruments and data sources chosen, or how each instrument assesses the efficacy of the intervention. May need more balance between quantitative and qualitative methods. Some forms of improvement science measurement that should be considered (outcome, driver, process, or balancing metrics) are neglected.	No rationale provided for instruments or data sources chosen; or instruments and data sources are not appropriate for the intervention.

	measures appropriate for improvement science (outcome, driver, process, and balancing measures). For pre-existing instruments, describes relevant research literature that previously utilized the instrument and reliability and/or validity of the instrument, if appropriate.		
-data analysis techniques-	Describes intended method of analyzing the results of each instrument or data source, supported by relevant literature. Analysis methods are appropriate for the instrument.	Needs more justification for the analysis methods chosen and their appropriateness for the instrument.	No analysis plan offered, or analysis plan is inaccurate for the instrument/method.
-IRB process-	Describes IRB approval process for all instruments.	Nees a more thorough description of the IRB approval process.	IRB approval process not addressed.
Results *-summary of quantitative methods and findings-*	Describes results from quantitative instruments. Summarizes the quantitative findings, clearly and accurately describes specific quantitative findings that describe the effectiveness or ineffectiveness of the intervention.	Description of the quantitative results needs more explication to accurately describe findings or connect findings more clearly to the efficacy of the intervention.	Description of quantitative results is inaccurate and/or incomplete. Results do not illuminate the efficacy of the intervention.
	Describes results from qualitative methods. Summarizes the qualitative data analysis process and	Description of the qualitative results needs more explication to accurately describe the data analysis process and/or themes	Description of qualitative results is inaccurate and/or incomplete. Results do not

-summary of qualitative methods and findings-	accurately describes themes and findings from each qualitative protocol that clearly and accurately describe the effectiveness or ineffectiveness of the intervention. Addresses how triangulation was achieved and how trustworthiness of the findings was ensured.	and findings and to connect findings more clearly to the efficacy of the intervention. Narrative may not fully or accurately describe triangulation and trustworthiness.	clearly convey the efficacy of the intervention. Triangulation and trustworthiness are not addressed.
-synthesis of qualitative and quantitative results-	Synthesizes the combination of quantitative and qualitative results to thoroughly and accurately explain the results of the intervention.	Results need more synthesis and/or stronger connection to intervention design.	Results are not synthesized and/or do not clearly or accurately convey the efficacy of the intervention.
Limitations of the Intervention	Accurately describes limitations to the intervention design or results.	Limitations require more explication.	Limitations have not been identified or are inaccurately presented and/or obvious limitations are omitted.
Recommendations for Next Intervention Cycle	Accurately draws conclusions from the intervention in terms of implications for the next cycle of intervention, connecting to appropriate literature when relevant.	Stronger linkages between the findings and implications for future intervention cycles are required.	There are no clear linkages between the intervention's results and future intervention efforts.

Chapter 4 Quality Rubric: The Second Intervention

This tool is designed to help WKU EdD students, course instructors, and chairs/committee members understand the features of a high-quality Chapter 4 as it appears in WKU improvement science dissertations in practice. Chapter 4 describes the second intervention cycle the student deployed to address the problem of practice that provided the basis of the improvement science study. This tool should be used in conjunction with the dissertation-in-practice framework found in Appendix A of the *WKU EdD Student Handbook*, the *WKU EdD Writing Rubric*, and relevant improvement science sources like Chapters 5-6 of Perry et al. (2020) and Chapters 6-8 of Hinnant-Crawford (2020).

Chapter element	Proficient	Developing	Unacceptable
Introduction *-overview-* *-linkage between this intervention and the root cause analysis-*	Briefly but accurately describes the purpose of the second intervention phase in improvement science, citing appropriate sources, and previews the structure of this chapter. Briefly and accurately summarizes the intervention deployed in this chapter and why it was appropriate based on the findings of the first intervention described in Chapter 3.	Intro may need to be strengthened in terms of more thoroughly or accurately describing the intervention process, citing appropriate sources, and/or previewing the structure of the chapter. Intervention description needs to be strengthened and/or more clearly connected to the first intervention described in Chapter 3.	No introduction; or the introduction fails to accurately describe the intervention process; or the described intervention is not connected to the first intervention findings.
Setting/Context: OPTIONAL SECTION (include only if the setting or context has changed for the second intervention)	Briefly and accurately describes any changes to the setting or context between the first and second intervention.	Description of setting and context change needs clarity or further description.	No effort to acknowledge changes in setting or problem of practice.
Intervention Design	Accurately describes scholarly and practitioner literature related to various interventions that have shown promise for	Informed readers can tell that search terms may need more refinement or that there is relevant literature not included	Literature review presents a haphazard set of literature that may not clearly relate to the

-intervention literature review-	impacting the overarching problem of practice considering the findings of the first intervention.	in the chapter. More discussion of how the second literature review was narrowed based on findings of the first intervention is needed.	first interventions or the problem of practice.
-case for this intervention over others-	Based on this literature review, describes which interventions were considered for the second improvement science cycle, and makes a compelling case for why the intervention described in this chapter was selected over others, connecting the second intervention to relevant findings from Chapter 3.	The case for why this intervention was chosen over others based on the literature and first intervention findings needs to be strengthened.	The chosen intervention is disconnected from the findings of first intervention.
-theory of action-	Describes a theory of action that clearly articulates why the second intervention is expected to impact the problem of practice, citing relevant literature, and presented with a graphic tool such as a driver diagram, logic model, or other visual representation.	Theory of action and related tools do not fully or clearly explain why the identified intervention is expected to impact the problem of practice.	No theory of action presented, or the theory of action fails to convey an understanding of how the proposed intervention should impact the problem of practice.
-PDSA-	Presents a Plan-Do-Study-Act graphic clearly and accurately illustrating the second intervention design.	Plan-Do-Study-Act graphic does not accurately or completely illustrate the intervention design.	No PDSA graphic included or the PDSA graphic fails to present a coherent intervention design.

Research Design *-research question and the intervention-*	Restates the improvement science research question and briefly and accurately describes how the proposed intervention addressed the RQ.	More linkage between the RQ and the proposed intervention is needed.	No restatement of the RQ.
-goals/purpose of the intervention-	Briefly, clearly, and accurately summarizes the goals and purpose of the second intervention and why and how it is different from the first intervention.	Description of the goals and purpose of the intervention and/or connection to the first intervention cycle needs more explication.	Description of goals and purpose of the intervention is unclear.
-participants-	Describes the participants for second intervention. If the same or different from the first intervention, accurately and clearly describes why. Participants should be purposively chosen to represent the relevant "users" of the problem. Describes how the researcher obtained access to these participants and secured their voluntary involvement. Describes IRB approval process for obtaining informed consent.	More explanation of why participants were chosen, how and why they were the same or different than the first intervention, and/or how access to participants was ethically obtained, is needed.	There is no coherent explanation for why participants were chosen or how access was ethically obtained.
-instruments and data sources description-	Describes the instruments and/or data sources used to measure the impact of the intervention. Instruments should reflect both quantitative	Needs a stronger rationale for instruments and data sources chosen, or how each instrument assesses the efficacy of the intervention. May	No rationale provided for instruments or data sources chosen; or instruments and data sources are not appropriate for the intervention.

	and qualitative methods appropriate to the context, problem of practice, and intervention. If new instruments are utilized since the first intervention, describes the design of each instrument, supported by relevant literature. Narrative describes how each instrument or item(s) of the instrument address the various measures appropriate for improvement science (outcome, driver, process, and balancing measures). For new pre-existing instruments, describes relevant research literature that previously utilized the instrument and reliability and/or validity of the instrument, if appropriate.	need more balance between quantitative and qualitative methods. Some forms of improvement science measurement that should be considered (outcome, driver, process, or balancing metrics) are neglected.	
-data analysis techniques-	Describes intended method of analyzing the results of each instrument or data source, supported by relevant literature. Analysis methods are appropriate for the instrument.	Needs more justification for the analysis methods chosen and their appropriateness for the instrument.	No analysis plan offered, or analysis plan is inaccurate for the instrument/method.
-IRB process-	Describes IRB approval process for all instruments.	Nees a more thorough description of the IRB approval process.	IRB approval process note addressed.
Results	Describes results from quantitative instruments.	Description of the quantitative results needs more explication	Description of quantitative results is inaccurate and/or

-*summary of quantitative methods and findings*-	Summarizes the quantitative findings, clearly and accurately describes specific quantitative findings that describe the effectiveness or ineffectiveness of the intervention.	to accurately describe findings or connect findings more clearly to the efficacy of the intervention.	incomplete. Results do not illuminate the efficacy of the intervention.
-*summary of qualitative methods and findings*-	Describes results from qualitative methods. Summarizes the qualitative data analysis process and accurately describes themes and findings from each qualitative protocol that clearly and accurately describe the effectiveness or ineffectiveness of the intervention. Addresses how triangulation was achieved and how trustworthiness of the findings was ensured.	Description of the qualitative results needs more explication to accurately describe the data analysis process and/or themes and findings and to connect findings more clearly to the efficacy of the intervention. Narrative may not fully or accurately describe triangulation and trustworthiness.	Description of qualitative results is inaccurate and/or incomplete. Results do not clearly convey the efficacy of the intervention. Triangulation and trustworthiness are not addressed.
-*synthesis of qualitative and quantitative results*-	Synthesizes the combination of quantitative and qualitative results to thoroughly and accurately explain the results of the second intervention.	Results need more synthesis and/or stronger connection to intervention design.	Results are not synthesized and/or do not clearly or accurately convey the efficacy of the intervention.
Limitations of the Intervention	Accurately describes limitations to the intervention design or results.	Limitations require more explication.	Limitations have not been identified or are inaccurately presented and/or obvious limitations are omitted.
Recommendations for Next Intervention Cycle	Accurately draws conclusions about the efficacy of the second intervention cycle,	Conclusions about the efficacy of the second intervention are somewhat unclear.	There are no clear conclusions about the efficacy of the second intervention.

	connecting to appropriate literature when relevant.		

Chapter 5 Quality Rubric: Conclusions and Recommendations

This tool is designed to help WKU EdD students, course instructors, and chairs/committee members understand the features of a high-quality Chapter 5 as it appears in WKU improvement science dissertations in practice. Chapter 5 concludes the improvement science study by summarizing the results of both interventions, relating the findings to previous literature, and making recommendations for future research, practitioners, and further cycles of intervention. This tool should be used in conjunction with the dissertation-in-practice framework found in Appendix A of the *WKU EdD Student Handbook*, the *WKU EdD Writing Rubric*, and relevant improvement science sources like Chapters 7-8 of Perry et al. (2020).

Chapter element	Proficient	Developing	Unacceptable
Introduction *-how this study exemplified improvement science-*	Clearly and accurately summarizes the improvement science process, citing relevant sources, and outlines how each step was addressed in the current study.	Discussion of the improvement science process needs more citations or elaboration. Some lack of clarity on how this study addressed each step of improvement science.	No or unclear connections between this study and the protocols of improvement science.
Discussion of Intervention 1 results *-the effectiveness of the intervention-*	Summarizes the findings from the first intervention, drawing conclusions about the effectiveness of the intervention in addressing the problem of practice.	Conclusions about the effectiveness of the intervention are unclear or need further elaboration.	It is unclear to the reader whether the intervention affected the problem of practice.
-supporting conclusions with evidence from the study-	Draws on evidence from the study to support conclusions.	More evidence from the study is needed to support conclusions.	Conclusions are drawn without supporting evidence from the findings of the study.
-connecting findings to previous literature-	Accurately relates findings to previous literature.	More connections are needed to the previous literature to bolster the trustworthiness of conclusions.	Conclusions are drawn without reference to previous literature.
-why the intervention worked, or why it didn't-	Offers literature-based perspectives on why the		Reasons for the intervention's success or lack of success are not discussed.

	intervention was successful or unsuccessful.	A stronger case for why the intervention was successful or unsuccessful is needed.	
Discussion of Intervention 1 results *-the effectiveness of the intervention-*	Summarizes the findings from the second intervention, drawing conclusions about the effectiveness of the intervention in addressing the problem of practice.	Conclusions about the effectiveness of the second intervention are unclear or need further elaboration.	It is unclear to the reader whether the intervention affected the problem of practice.
-how the second intervention revealed new knowledge-	Describes how the findings from the second intervention combine with the findings of the first intervention to inform a more comprehensive assessment of the entire study's effectiveness.	Linkages between the findings of the first and second intervention require more elaboration.	No linkages are made between the first and second interventions.
-supporting conclusions with evidence from the study-	Draws on evidence from the study to support conclusions.	More evidence from the study is needed to support conclusions.	Conclusions are drawn without supporting evidence from the findings of the study.
-connecting findings to previous literature-	Accurately relates findings to previous literature.	More connections are needed to the previous literature to bolster the trustworthiness of conclusions.	Conclusions are drawn without reference to previous literature.
-why the intervention worked, or why it didn't-	Offers literature-based perspectives on why the second intervention was successful or unsuccessful.	A stronger case for why the intervention was successful or unsuccessful is needed. It is unclear to the reader whether the intervention affected the problem of practice.	Reasons for the intervention's success or lack of success are not discussed.

How Theory Drove Improvement	Accurately and clearly relates the findings of the improvement science study to the leadership and other theoretical frameworks that informed the study's design.	Linkages between findings and the leadership and other theoretical frameworks informing the study's design require further elaboration.	No attempt is made to relate the findings to leadership and other theoretical frameworks.
Implications for future interventions	Clearly and comprehensively discusses what the next cycle of intervention for the organization might be to address the problem of practice based on the findings of the improvement science study.	Conclusions about the next improvement cycle need further explication or connection to the study's findings.	Recommendations for the next intervention cycle appear to have no connection to the study's findings.
Optional (Equity Implications)	When equity elements were present in the study or in the findings, clearly describes those equity elements and implications for future interventions, drawing on previous research and theory.	When equity elements were present in the study or findings, more elaboration is needed to clearly describe those elements and their implications, and/or more research and theory is needed to support these recommendations.	Where equity elements were present in the study, these were undiscussed or ignored.
Limitations	Accurately and thoroughly discusses the limitations of the study, including in its design, delivery, or findings.	Limitations discussion may be partially incomplete or require further elaboration.	No limitations are noted, or limitations are inaccurate to the actual study design or findings.
Recommendations	Provides a clear and comprehensive set of recommendations for practitioners, education leaders, and researchers interested in further examining the problem of practice, based on the findings of the study.	More discussion of how the study's findings support recommendations for practitioners, leaders, or researchers is needed. Important recommendations may be overlooked.	Fails to make future recommendations or neglects recommendations for key groups including practitioners, researcher, or leaders. Recommendations are inaccurate relative to the findings of the study.

Final Conclusions	Briefly recaps the study's design and findings and clearly and accurately describes the significance of the study for researchers and practitioners.	Recap of the study and its significance needs more elaboration.	Fails to clearly or accurately describe the significance of the study's findings.

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