Designing a rubric for summative assessment and student reference
- a students-as-partners-inspired approach

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Introduction

Earlier this year (2024), I conducted the mandatory oral end-of-course evaluation for a pre-graduate course where I served as co-course leader. While the course and teaching received positive feedback in general, much of the session consisted of students expressing their frustration and uncertainty about the coming written exam assignment. They raised concerns about not knowing what to cover or the expected level of detail, noting that while they appreciated the exam format, they found the assessment criteria unclear.

Well-designed exams are not just a way to assess students' knowledge and skills – they also serve as a tool for deepening understanding and fostering meaningful engagement with the course material. As educators, we aim to create exams that do more than measure performance, they should also support learning. Achieving this requires careful consideration of exam design, assessment criteria, and alignment with learning objectives (Hounsell & Hounsell 2007; Biggs 1996; Kickert et al. 2022; Skov 2015). If students are unaware of the purpose of the assignment, the assessment criteria and how to meaningfully engage with the course material, there is little chance of deeper learning and achieving congruence between their efforts and the desired learning. A lack of such transparency may even negatively impact student learning (Jonsson 2014). Providing a clear framework can make the students feel more confident about the assignment which motivate their learning and help shape the way they work (Chan & Ho 2019).

Research suggests that assessment rubrics can enhance this transparency (Jonsson 2014; Qidong 2020), particularly when co-created or collaboratively revised with students – a practice that may

also boost student engagement (Laville et al. 2023; Do et al. 2024). Student engagement is a key factor in higher education, influencing learning outcomes and academic success (Dost & Mazzoli Smith 2023). Fredricks et al. (2004) conceptualize engagement as a multidimensional construct comprising three components: behavioral, emotional and cognitive engagement. *Behavioral engagement* involves participation in academic, social, or extracurricular activities and is centered around 'time and effort'. *Emotional engagement* refers to positive or negative reactions to teachers, peers, and academics, shaping students' connection to the institution and their motivation. *Cognitive engagement* reflects investment in learning, the willingness to exert the required effort and persistence to grasp complex ideas and master difficult skills – it can range from surface learning, such as memorization, to the use of self-regulated learning strategies that promote deep understanding (Fredricks et al. 2004).

Student engagement, including active learning environments and respectful relationships between students, teachers, and peers significantly contribute to the sense of belonging. A strong sense of belonging supports student well-being and mental health and has been linked to higher academic motivation and increased likelihood of succeeding both academically and personally (Dost & Mazzoli Smith 2023).

The students-as-partners (SaP) ideology emphasizes collaboration between students and faculty and has been defined as *a collaborative, reciprocal process through which all participants have the opportunity to contribute equally, although not necessarily in the same ways, to curricular or pedagogical conceptualization, decision making, implementation, investigation, or analysis* (Cook-Sather et al. 2014). The SaP approach contributes to students' sense of belonging and promotes meaningful engagement (Laville et al. 2023; Cook-Sather et al. 2014; Healey et al. 2016).

Based on the above considerations, the objective was to create an SaP-inspired assessment rubric that included the student perspective. The purpose of the rubric is dual; offering students a reference source providing a clear framework for understanding the expectations to the exam assignment including the assessment criteria and a tool for the graders to guide the assessment of the assignments.

The context of the project

The project is rooted in the 10 ECTS elective course "Perinatal and Early Life Epidemiology" offered in the Public Health MSc program, where I serve as co-course leader, co-teacher and co-grader alongside my colleague. When I joined the course management, the course description, its intended learning outcomes, and the exam format were already established. The course included ten modules, each covering 1-2 topics. The exam was a take-home project designed as a research project proposal for which the student defined the research question to be addressed. The exam project was intended to, on a small scale, fulfill the requirements of a research proposal within perinatal and early life epidemiology for a funding application. While such requirements were not explicitly outlined in the exam description of the course description (Appendix 1), they were touched upon on the first day of teaching. The students developed the exam project alongside the course, and module 6 specifically focused on discussing and refining the students' research questions together with peer-students and teachers.

The mandatory end-of-course evaluation took place during the last teaching session, before the deadline for the exam. At the students' request, the second half of this evaluation took the form of a Q&A session about the exam, where I clarified the content, level of detail, and assessment criteria. They expressed that this helped reduce their frustration and anxiety. I therefore decided that for the next perinatal and early life epidemiology course, I would consider how to make the description and assessment criteria more clear for them earlier during the course. Moreover, during the grading of the exam assignments, it was evident that my co-course leader and I were closely aligned regarding the grades and very much agreed on the weighing of different elements and levels of details required. However, I felt much of this relied on tacit knowledge of requirements and expectations. To address this, and since graders may vary in the future, I decided to create an assessment rubric to enhance transparency for students and to maintain reliability in assessments. I invited the students and my co-course leader to co-create this rubric, valuing their perspectives and believing it would enhance the students' engagement.

Exam format and assessment rubric

During the course evaluation, the students appreciated the exam format and expressed that the degree of individual choice and autonomy enhanced their motivation. I believe the format is also relevant in the sense that it makes it possible to assess both knowledge, skills and competencies relevant to perinatal and early life epidemiology, but also the program as a whole (Hansen et al. 2015). It is appropriate for assessing critical, reflective and analytical epidemiological thinking as well as more general academic requirements for pre-graduate students (Skov 2015; Hansen et al. 2015). However, it was clear that we needed a common understanding of the purpose of the exam as well as the assessment and expectations to the students to enhance transparency.

A rubric is an assessment tool and can be defined as a collection of criteria for assessing students' work; these criteria consist of descriptions of the performance and standards that students are expected to achieve (Brookhart 2018) and they usually includes Popham's three essential features (Popham 1997): evaluative criteria, quality definitions for those criteria at particular levels (descriptors) and a scoring strategy (Appendix 2). A rubric provides the framework or outline of an assignment; they give students a clearer idea of what content should be included, what should be emphasized and what a higher quality of work looks like (Chan & Ho 2019). Co-creating the rubric with students can help establish this shared understanding while also enhancing their engagement across all three components of engagement introduced earlier. I will explore this in more detail in the discussion.

Rubrics can be characterized by many dimensions, e.g. whether they are generic or task-specific. An important characteristic is the scoring strategy that can be analytic or holistic. Holistic scoring involves judging overall quality by considering all evaluative criteria together, while analytic scoring requires evaluating the individual evaluative criteria and often combining them formulaically for a final score (Dawson 2017).

Methods

To achieve the aim of a shared understanding of the purpose of the exam and the assessment criteria, as well as the aim of including the student perspective in the assessment rubric, the design was performed in a SaP-inspired arrangement where I invited students to co-create the rubric and discuss ideas about supplementary resources. I invited students from the 2024 course who recently conducted the exam and who therefore would be familiar with the course, the ILO's and the exam assignment. Three students initially volunteered, but one had to cancel at the last minute.

The rubric was designed for summative assessment as well as a reference source for the students. Key stages of rubric construction include: linking the task and rubric to the learning objectives, identifying the criteria in accordance with the learning objectives, establishing the contributions of the criteria to the total score, defining performance levels, creating a draft rubric, and reviewing and revising the draft as necessary (Zhang et al. 2024). Designing the rubric was an iterative process involving two separate meetings with the co-course leader and the two students. Before drafting the rubric, I held pre-meetings to gather input. In the student pre-meeting, I explained the purpose of this project, addressed their concerns about the exam, introduced Bigg's principle of constructive alignment (Biggs 1996), and discussed the course ILOs, exam description, and their recent experiences. I emphasized their role as experts and the value of their perspectives. In the meeting with the co-course leader, we reviewed the evaluative criteria, learning objectives, and insights from the previous exam. Both pre-meetings included discussions on rubric design and scoring strategies (analytic vs. holistic).

The approach I used was a mix of top-down, where we started with the conceptual framework describing the content and performance (the course description), and bottom-up where samples of student work and ideas was used to create a framework for the assessment (previous exams and involvement of students in the design) (Brookhart 2013). The initial evaluative criteria were developed based on the course description and key elements typically required in a funding application. The student's thoughts about what evaluative criteria to include, discussed during the pre-meeting, matched the evaluative criteria already included. To refine these

criteria, I analyzed feedback from my co-course leader and myself – including our comments, questions, and grading from the 2024 exam – alongside notes from pre-meetings with the two students and my co-course leader. This informed the creation of an initial rubric using AI. However, this initial draft was too generic and not useful for this specific assignment, though the descriptors for the evaluative criterion about general understanding of the field was useful. I created a first draft using these as well as inspiration from gray literature that promoted the use of its rubric as a basis for co-creation efforts (Kæstel 2023; Andersen 2024).

The first rubric draft was shared with the two students and co-course leader to obtain their preliminary feedback. They reviewed it at home and were then invited for a follow-up meeting, where we had an open dialogue about their comments and ideas for the design of the rubric and the supplementary materials. Based on these discussions, I revised the rubric and shared it again for final feedback.

This is where I am in the process now. The next steps will focus on implementing the rubric in upcoming perinatal and early life epidemiology courses. My plan was originally to distribute the existing rubric to the future students while discussing its content to ensure a shared understanding and gather feedback on its clarity as a reference for exam expectations. However, through the co-creation process, I realized that the process seemed at least as important for fostering cognitive engagement as the final product itself. Therefore, I plan to also involve future students in a co-creation or co-revision process, where we collaboratively explore the evaluative criteria, descriptors and terminology as an integrated part of the course. This approach not only ensures that the rubric is actively integrated into the course but also fosters cognitive engagement, as the students critically reflect on the evaluative criteria and their meaning for their learning. I will elaborate on this in the discussion section.

Results

During the pre-meetings, some important points about congruence and the learning objectives for the exam stated in the course description were discussed and two of the objectives were specifically questioned in both the student and the co-course leader meetings. These will be revised but will not be discussed here.

During the first iteration, the two students' main suggestion for revision was to combine the evaluative criteria for the introduction, included literature, and definition of the perinatal and early life problem as these elements are typically intertwined, making it "*a bit awkward*" to separate them into distinct criteria. Both students appreciated that I had included criteria beyond the stated learning objectives, focusing on general academic skills assessed in pre-graduate assignments, such as identifying relevant scientific literature and writing with clarity and conciseness.

We also discussed the terminology in the rubric, particularly the distinction between *highly relevant* and *reasonably original* in relation to the problem/research question. These terms highlighted differences in interpretation between the two students and me, underscoring the need for a dedicated discussion on terminology and its meaning, if an existing rubric is distributed to future students. Vague or unclear terminology in rubrics can lead to misunderstandings, and despite our efforts to use clear language, I anticipate that students who were not involved in developing and discussing the descriptors may struggle to understand or interpret them as intended.

The co-course leader suggested softening the wording of the descriptors for the evaluative criterion regarding data analysis strategy, as she found the expectations too ambitious across quality levels. She also suggested expanding the ethical considerations descriptors to clarify the expectations; addressing both potential data security considerations, e.g. no personal identification, as well as broader ethical concerns, such as potential stigmatization. Moreover, we discussed the evaluative criterion regarding the students developing a project budget. This would be an essential part of every research project description for a fund application, but as this is not something we focus on during the course, we have previously not placed much emphasis on it in the assessment, if any. We therefore decided not to include this evaluative criterion in the rubric.

During the meetings, we discussed the design of the rubric in relation to the design and scoring strategy. One student suggested that the rubric might be easier to use as a guide for the assignment if it was less detailed and included fewer quality levels, such as excellent, adequate and inadequate, though the other student did not agree. The draft rubric was analytic in design, but the intended scoring strategy

was more holistic, as the graders provides a single final grade which is not calculated using sub-scores for individual criteria. The two students and the co-course leader supported this approach, even though it blends analytic and holistic elements. Thus, the revised rubric maintained an analytic design but used a more holistic scoring strategy for the summative assessment. The holistic rubric have been stated superior in situations where students only receive a grade and will not see the actual assessment (Brookhart 2013), however, the two students expressed that they believed they would miss the descriptors for the different quality levels if using a purely holistic rubric. Moreover, they noted that they did not need specific point allocations from the analytical strategy to use the rubric for self-assessment and guidance of their work. However, one student mentioned that having an approximate weighting of the different parts of the assignment, such as in percentages, could be helpful – the other student did not agree.

The two students and the co-course leader evaluated the revised rubric (Appendix 3) and had no further comments. As mentioned, the two students did not agree on all aspects related to the design and usefulness of the rubric. Consequently, not all of their ideas were incorporated. This was acknowledged by the students, but accepted, as it would not be possible to design a rubric satisfying the diverging opinions.

Discussion

The design phase of the rubric was inspired by SaP ideologies and practices. By involving students in the creation of the rubric, both their experience and understanding are enhanced, and the process benefits from a two-way exchange. Student-faculty partnerships are central to advancing rubric construction (Laville et al. 2023) and by recognizing that students are experts in being students at their institution (Laville et al. 2023; Cook-Sather et al. 2014) and hearing their voice, the rubric will likely be more effective and improve both student learning and the grading (Chan & Ho 2019).

The starting point for creating a tool to make the purpose of the exam and the assessment criteria more clear was the students' frustration and uncertainty. Clear assessment criteria, e.g. in a rubric,

can alleviate these feelings and potentially increase emotional engagement (Fredricks et al. 2004). The students in the perinatal and early life epidemiology course were excited about the topic they had chosen and enjoyed working on it. I believe that reducing their frustration and uncertainty would lead to more positive feelings and attitudes towards the exam and increase their willingness and eagerness to engage with the material and explore the topic more deeply.

The co-creation of the rubric encompassed both a process and a product and as mentioned, I realized during the co-creation process that simply distributing the rubric (the product) to future students will most likely not foster cognitive engagement, though it may increase performance. As described in the introduction, we need to be aware of what kind of motivation or engagement is encouraged by the way exams are developed and supported. Usually we aim to create exams that not only assess the performance, but also enhance deep learning and foster meaningful engagement with the course material. Distributing the existing rubric to future students may encourage a performance- or achievement-oriented approach to learning. If students regard the rubric as 'a clear path to success', they may be more willing to invest time and effort in their work (behavioral engagement) (Fredricks et al. 2004), but not necessarily engaging in deep learning. This aligns with the two students' concern that some students may interpret the rubric too rigidly, treating it as a formula for structuring their assignment (e.g., following its order, starting with an introduction) to ensure a good grade.

We must understand rubrics as something users interpret in the context of their relevant experiences (Tan 2020), which is why we as teachers need to actively engage with the students about the rubric, its purpose and the included terminology. If an existing rubric is distributed, teachers must make rubrics accessible by clarifying expectations, facilitating discussions, and providing support to decode assessment criteria (Jonsson 2014; Laville et al. 2023). In an SaP-inspired approach, where evaluative criteria and descriptors are co-created or co-defined, this engagement becomes an integral part of the learning process.

Breaking down the assessment components in the rubric can help students monitor their progress and reflect on their learning strategies. If the rubric (the product) emphasizes critical thinking,

argumentation, and synthesis, rather than just surface-level criteria, students are more likely to engage deeply with the material, enhancing their cognitive engagement. Additionally, my future plans of co-creating or co-defining assessment criteria for the exam as part of the course, involves guiding the students to understand the norms, values, and key elements that are essential for funding applications and scientific project descriptions, which can help the students clarify key expectations. The discussions and negotiations during this process, along with a shared understanding of the emphasis on critical thinking and argumentation, would further enable students to develop strategies to engage meaningfully and deeply with the material. In this course, we have an opportunity to work with these understandings throughout the course, and especially in module 6, where we focus on students' research questions, argumentation and synthesis.

The rubric was initially designed for summative assessment and as a reference for students. However, fostering student learning through reflection and self-awareness requires its active use for feedback throughout the course or program, rather than solely during exam writing (Do et al., 2024). Engaging students in co-creating or revising the rubric early in the course helps convey the deeper meaning behind its elements from the outset. Actively integrating the rubric into teaching transforms both the process and product into a tool for formative assessment, promoting reflection and self-awareness through the feedback (Yorke, 2003). This feedback can take various forms, including peer feedback, self-assessment, and teacher input. One approach could be to incorporate smaller, ongoing assignments – such as thematic assignments or continuous assessment (Bjælde et al. 2017) – using the rubric as a tool to identify next steps. This would allow students to develop deeper learning and refine their skills (Do et al. 2024). However, co-creating assessment criteria as part of the course, along with ongoing formative assessment, requires significantly more time and effort from students – and, in some cases, from the teacher as well. Additionally, it necessitates space in the curriculum, which would require adjustments to the course structure, potentially removing other content to make room for this process.

Involving students in the co-creation and revision of educational aspects, requires acknowledging the power dynamics between faculty and students, which is an inherent challenge within the SaP approach. The essential principles of SaP; *respect*, *reciprocity*,

and *shared responsibility* (Cook-Sather et al. 2014), was used to explicitly address this issue with the aim of creating a safe environment with an open dialogue where the students felt comfortable with contributing their ideas and be critical of the work. I explicitly addressed this issue in all the student meetings by, among other things, noting that the student perspective was very important and that they were the absolute experts on this.

The UCPH 2030 strategy prioritizes diversity, equity and inclusion across all activities at the University (University of Copenhagen 2023), which is in line with the student engagement ideology and the SaP approach. However, in this project, only two students participated. Participation was voluntary and the timing may not have been ideal, as December is a busy month for students with exams and exam preparations. The students who volunteered were already active and engaged students and as a result, the perspectives provided may not capture or represent the diverse range of opinions and student experiences (Do et al. 2024) – which in previous SaP-studies have been found to be a potential concern as it may increase the inequality among the students (Smith et al. 2024) – moreover, the two students did not agree on all aspects. In the future, involving students in the co-creation/co-revision process as part of the course will help address this issue by naturally leading to a wider involvement of students. However, the question of whose voices are heard, and the issue of inequality will still need consideration.

Assessment of exam assignments often have an element of subjectivity in the grading which it is not possible to fully eliminate. The discussion during the creation of the rubric helps develop a shared understanding of the performance level of each of the criteria, increasing the reliability of grades given by multiple graders and the consistency of assessments (Tekin 2023). The creation of the rubric also led to discussions and reflections among the course leader team on the evaluative criteria and descriptors, which has revealed some of the tacit knowledge in the assessment process that have not previously been considered. However, identifying the quality in a specific assignment, distinguishing between quality levels and making a holistic assessment across evaluative criteria requires judgement and, even with the rubric, this judgement will nevertheless be complex (Dawson 2017). Achieving complete transparency and eliminating all ambiguity in the assessment process for this exam is not feasible.

Therefore, involving students as much as possible in understanding the objectives and rationale is essential, and the SaP approach plays a key role in this.

Conclusion and reflections

Using an iterative SaP-inspired approach, we developed an assessment rubric to meet the dual objectives of serving as a reference for students to identify exam expectations and criteria, as well as guiding graders in assessing the assignments. The descriptions of the expected levels of achievement in the rubric may be part of the solution to the students' expressed frustration and concern about the exam assignment by enhancing transparency (Qidong 2020). However, distributing the existing rubric to future students may encourage a performance- or achievement-oriented approach to learning and will not necessarily foster cognitive engagement. The SaP-inspired design aimed to also foster student engagement, and I discuss how both the process and the product (the rubric) influence engagement in different ways, aligning with the three components conceptualized by Fredricks et al. (2004): behavioral, emotional, and cognitive engagement. The discussions and negotiations during the co-creation process, along with a shared understanding of the emphasis on critical thinking, argumentation, and synthesis, would help students develop strategies for engaging meaningfully and deeply with the material (cognitive engagement). Therefore, rather than simply distributing the rubric to future students, I plan to incorporate the co-creation or co-revision of assessment criteria into future courses, engaging all students in the process. However, this requires space in the curriculum, which may necessitate adjustments to the course structure, potentially reducing other content to accommodate this approach.

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Appendix 1

Information about the type of assessment, type of assessment details and criteria for exam assessment for the course SFOK15011U Perinatal and early life epidemiology (from the course description)

Type of assessment
Written assignment

Type of assessment details
The students is expected to develop a research project proposal within the area of perinatal/early life epidemiology during the course. The project proposal should be handed in few weeks after the teaching has come to an end.

Criteria for exam assessment
The assignment is expected to fulfil the formal requirements for a research project proposal. To achieve the grade 12, the student must be able to:
Knowledge
Make a coherent justification for and describe a scientific problem within perinatal/early life epidemiology.
Describe the detailed design of an epidemiologic project that addresses this scientific problem, usingsound epidemiologic methodology.
Describe a feasible study plan, including a realistic time frame.
Skills
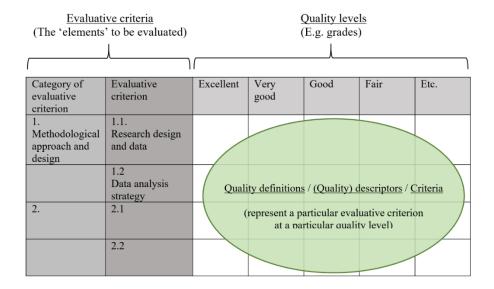Identify the most serious public health threats to healthy reproduction and infancy.
Competencies
Design, implement and assess data collection systems for public health research.
Appropriately interpret epidemiologic data within reproductive/early life epidemiology.

Appendix 2

Overview of the terminology used to describe the elements of a rubric, based on characteristics outlined by Phillip Dawson[a].

[a] Dawson P (2017). Assessment rubrics: towards clearer and more replicable design, research and practice. *Assess Eval High Educ*. 2017;42(3):347-360. doi:10.1080/02602938.2015.1111294

Appendix 3

Revised rubric

Category of evaluative criterion	Evaluative criterion	Quality level (grade*)					
		Excellent (12)	Very good (10)	Good (7)	Fair (4)	Minimally adequate (02)	Inadequate (00)
1. Clarity and relevance of problem definition and rationale	1.1 Clarity and relevance of introduction, literature, and problem definition	The introduction is clear, logical, and well-supported, with a compelling rationale for the research. It is based on a strong and highly relevant review of up-to-date, high-quality scientific literature. The perinatal/early life problem is thoroughly identified and described, and a specific, highly relevant, and reasonably original research question is clearly defined	The introduction is clear and logical, with minor gaps in the rationale. It draws on a strong review of mostly relevant and accurate scientific literature. The perinatal/early life problem is clearly identified, and a specific and relevant research question is defined, with slight room for improvement in originality or precision	The introduction is mostly clear but has some inconsistencies in the rationale. It is based on an adequate review of literature, though some key references may be missing or less relevant. The perinatal/early life problem and research question are identified but lack depth, precision, or clear relevance to the perinatal/early life context	The introduction is somewhat clear but poorly organized or weakly supported. It is based on a limited review of literature, with significant omissions or less relevant sources. The perinatal/early life problem and research question are unclear or lack relevance	The introduction is unclear or poorly reasoned, with minimal connection to the literature or reliance on irrelevant or non-scientific sources. The perinatal/early life problem and research question are poorly defined, vague, or irrelevant	The introduction is incoherent or missing, with no meaningful review of literature. The perinatal/early life problem is not – or very poorly – identified, and no relevant or specific research question is defined

2. Methodological approach and design

Criterion						
2.1 Research design and data (design)	Rigorous and appropriate design; demonstrates strong understanding	Strong design; minor weaknesses in clarity or justification	Adequate design; some key aspects unclear or unjustified	Weak design with significant gaps or poor justification	Weak design with major errors	No clear or flawed methodological design; major errors
2.1 Research design and data (data)	The specific data and data sources are thoroughly described and highly relevant to the research question(s)	The data and data sources are clearly described and relevant, with some minor gaps in detail	The data and data sources are relevant but lack sufficient detail to fully connect with the research question	Description of data/data sources lacks clarity and/or relevance to the research question	Description of data/data sources is vague and only minimally relevant to the research question	No or irrelevant description of data and data sources
2.2 Data analysis strategy	A clear data analysis plan that aligns with the research question and includes a basic identification of potential limitations, with strategies suggested to address them	A clear data analysis plan that addresses the research question and briefly mentions potential limitations, with general suggestions for addressing them	A basic data analysis plan that addresses the research question. Limitations are mentioned, but strategies for addressing them are minimal or vague	A data analysis plan is provided, but it is limited in scope, lacks sufficient relevance to the research question or omits meaningful discussion of limitations and strategies	The data analysis plan is unclear, incomplete, or only loosely related to the research question, with no consideration of limitations or strategies	No viable data analysis plan provided, or the plan is entirely unrelated to the research question
2.3 Timeline (less weight than other elements)	Realistic plan with minor issues	Realistic plan with minor issues	Adequate timeline but some gaps or unrealistic aspects	Questionable feasibility/ unrealistic timeline	Poorly constructed timeline	No or irrelevant timeline
2.4 Ethical considerations (both data security considerations, e.g. ensuring anonymity, and broader ethical concerns, e.g. potential stigmatization)	Includes relevant ethical considerations	Includes relevant ethical considerations	Includes some-what relevant ethical considerations	Ethical considerations are irrelevant or trivial	No or irrelevant ethical considerations	No or irrelevant ethical considerations

Criteria						
3. Presentation and structure						
3.1 Clarity of writing and structure	Clear, concise, and well organized	Mostly clear and organized; minor issues in flow	Generally clear, but some issues with coherence or organization	Unclear or disorganized in parts; hinders understanding	Poor structure and clarity; hard to follow	Writing is incoherent or disorganized
4. Scholarship and comprehension						
4.1 General understanding of perinatal/early life epidemiology	Deep, insightful understanding of key concepts and current research	Thorough understanding with minor gaps	Solid grasp but lacks depth in some areas	Basic understanding with significant gaps or errors	Superficial understanding, multiple errors	No meaningful understanding; major errors
	Excellent use of epidemiological terminology and concepts, demonstrating a thorough understanding and appropriate application throughout	Strong use of epidemiological terminology and concepts, with only minor lapses or inconsistencies in their application	Appropriate use of epidemiological terminology and concepts; few terms are used inaccurately or without full understanding	Basic use of epidemiological terminology and concepts, but with frequent inaccuracies or a lack of understanding	Limited or incorrect use of epidemiological terminology and concepts, limited or incorrect understanding or application	No use or irrelevant use of epidemiological terminology and concepts
Overall assessment (holistically across evaluation criteria)	Only minor shortcomings of the study in general	Some less significant shortcomings of the study in general	A number of shortcomings in the study in general	Several significant shortcomings of the study in general	Minimum acceptable degree of fulfillment of requirements in general	Unacceptable degree of fulfillment of requirements

* The grade -3 is not included as this is 'no show'