

The Sports Gene Discussion

We will be using the book The Sports Gene: Inside the Science of Extraordinary Athletic Performance by David Epstein to foster additional class discussion on topics not typically covered in a traditional exercise physiology textbook (e.g., the impact of nature- genes vs. nurture- training, race, sex, etc. on athletic performance). These topics bring a deeper level of analysis, highlighting the complexity of questions and research in this field.

David Epstein has a master's degree in environmental science and was a senior writer for *Sports Illustrated*. He himself is not an exercise scientist or researcher; however, he synthesizes the information from numerous scientific journal articles and interviews to present an interesting and compelling story in The Sports Gene.

One of my goals for you in this course is to be able to critique misconceptions and literature in the field of exercise by using evidence (SLO4). This goal involves you being proficient in critically reviewing journal articles. You will be building and using that skill in this assignment. Additionally, I hope this book showcases for you the interconnectedness and complexity of ethics, communication, research, and science; reinforces the breadth of the field; and inspires you with curiosity.

For this assignment, you will lead one in-class discussion.

This assignment is worth 20% of your final course grade.

Your Task

As an individual, you are expected to read all chapters of The Sports Gene and contribute to in-class discussions. You will sign up to lead a 20 minute in-class discussion covering two consecutive chapters in The Sports Gene and prepare a corresponding slide.

Select 1 theme discussed in your two assigned chapters. Within that theme, select 1 peer-reviewed journal article that was referenced in the book. Do not select a review article; the article you choose should be a piece of original research. Hint: Refer to the Notes and Selected Citations section at the end of the book. Your task is to lead a discussion on the topic and peer-reviewed journal article.

Send Professor Rooney your chosen article 1 week in advance of your in-class discussion. Along with your chosen article, send 1-2 questions related to your chosen article theme that you want the class to consider while reading The Sports Gene chapters. These questions will help focus your classmates as they complete their reading.

Format

1. Summarize the Theme, ~2 min

Introduce your discussion by commenting on

- A. the theme you selected,
- B. why you selected it, and
- C. how Epstein presented the theme in The Sports Gene.

2. Summarize the Journal Article (with slide), ~5 min

Summarize the journal article you chose. Spend no more than 5 minutes on this summary. Refer to your slide as a guide.

- Background
- Objectives
- Specific Hypotheses
- Key Methods
- Key Results
- Discussion/Conclusions

3. Critique the Article, ~3 min (refer to the handout from lecture 1)

Methods/Results: Are the methods used appropriate to test the specific hypotheses posed and answer the main question? Do the authors use a rigorous statistical analysis and experimental design? Were the data represented well in figures? Were the figures helpful?

Discussion/Conclusions: Do the authors interpret their data fairly to test their hypotheses? How well supported are their conclusions? Do you agree with their conclusions, based on the data presented?

Limitations: What are the limitations of this study? How general of conclusions can be drawn from this study, or must conclusions be restricted to a subset of a population?

Takeaway: What is your main takeaway from the study?

4. Relate Article to Book, ~3 min

Discuss how the conclusions drawn from the journal article compare to those presented by Epstein in The Sports Gene. Did Epstein use this source appropriately? Are the “facts” presented by Epstein a fair representation of the real science? Would you change how this primary source is used?

5. Engage Class in Discussion, ~7 min

I’m looking for a rich, interactive experience that engages the whole class. Get your classmates thinking and talking about complex questions. Discussion implies interaction between you (the facilitator) and your classmates. Pose open-ended discussion questions to your classmates. Your classmates may also ask you questions. You can format this portion in whatever way you think is appropriate: slides, handouts, dialogue, activities, etc.

Slide

Prepare 1 slide that summarizes the journal article you chose. This slide should align with the “Summarize the Article” portion of your in-class discussion. This slide will be a useful “cheat sheet” for your classmates. You may format your slide however you think is appropriate as long as you address all of the key components of the paper (Background, Objectives, Specific Hypotheses, Methods, Results, Discussion/Conclusions) in a clear, concise, effective manner.

The Sports Gene In-Class Discussion Rubric

	Excellent [A]	Good [B]	Fair [C]	Poor [D]	Missing
Summarize Article	Provides accurate, concise summary of key components of article, including background, objectives, hypotheses, methods, results, and discussion/conclusions. Audience is able to grasp the scope of the study. [25-23]	[22-20]	[19-18]	Summary is missing key details that explain the scope of study. Audience is left guessing at purpose, methods, results, and takeaways of the study. Summary may be too lengthy or provides unnecessary details. [17-15]	[0]
Prepare Slide	Slide provides concise, clear, accurate summary of journal article. Include key figures. Limited to 1 slide. Useful tool for classmates. [10-9]	[8]	[7]	Slide missing key details that explain the scope of study or is dense, providing unnecessary details and leaving the reader unsure of the takeaways. Slide is not a useful tool. [6]	[0]
Critique Article	Critically evaluates the quality of the experimental study. Discusses the methods/results (Appropriate for hypotheses? Rigorous stats? Useful figures?), discussion/conclusions (Fair interpretation of data? Do data support conclusions?), limitations (Limitations of study design/methods, generalizability of conclusions), and key takeaways . [30-27]	[26-24]	[23-21]	Critique is superficial and lacks depth. Does not expand upon the methods, discussion/conclusions, and limitations. Missing a thoughtful analysis of the article. Key takeaways do not align with the study. [20-18]	[0]
Relate Article to Book	Discusses how the conclusions drawn from the journal article compare to those presented by Epstein. Critically evaluates whether journal article is appropriately referenced in <u>The Sports Gene</u> , citing evidence and justifying. [15-14]	[13-12]	[11]	Incomplete discussion of how conclusions drawn from journal article compare to those presented by Epstein. Superficial evaluation of whether article is appropriately referenced in The Sports Gene. Makes claims without evidence and justification. [10-9]	[0]
Facilitate Discussion	Maintains control of the discussion with leadership and confidence. Guides but does not dominate discussion. Poses thought-provoking questions, listens to comments, summarizes, and responds. [20-18]	[17-16]	[15-14]	Dominates discussion or reluctant to exercise leadership, showing uncertainty and lack of confidence. Lets group ramble or stray off track. Poses mundane questions that do not promote a discussion. [13-12]	[0]