

00:34:46 Guizella Rocabado: HI! Guizella Rocabado, PhD Student in Chemistry at University of South Florida.

00:34:49 Laura Campo: Hi all! I am Laura Campo, PhD student at the Institute of Criminology, University of Cambridge

00:34:51 Tashnuva Shaheen: Tashnuva, call me Tash, doctoral student at Boston University!

00:34:52 Tara Heikila: Hi! I am Tara Heikila. I'm a doctoral student at Washington State University.

00:34:52 Brigitte Sánchez Robayo: Hello everyone. I am Brigitte Sanchez Robayo, a PhD student in Mathematics Education and a GTA at Virginia Tech.

00:34:55 Logan Wiseman: Hello! I am a graduate assistant at Western Kentucky University

00:34:56 Bala R: Hello! I am Bala, a masters student at Teachers College, Columbia University

00:35:05 Luz Minaya: Hello Everyone! I am Luz Minaya, EdD Student at The University of Southern California!

00:35:20 Katie Conley: Hi, my name is Katie Conley. I am a doctoral candidate in the Special Education program at the University of Oregon.

00:35:22 Ilana Umansky: Hi everyone! I am Ilana Umansky, faculty at the University of Oregon.

00:35:31 Brit Toven-Lindsey: Hi everyone! I'm Brit. I'm a postdoc at California State University East Bay.

00:35:39 Gill Francis: Hi, Gill Francis. Research Associate with the University of Cambridge working on the EdTech Hub project.

00:35:43 aaron price: I'm Aaron Price, Director of Research and Evaluation at Museum of Science and Industry, Chicago.

00:35:58 Lauren Berny: Hi! I am Lauren Berny, PhD student at University of Oregon.

00:35:59 Erica Webster: Erica Webster, Ed.D candidate at Binghamton University

00:36:00 Angelina Conti: Angelina Conti, doctoral student the School of Education at UPenn

00:36:00 Norma Ming: Norma Ming, Supervisor of Research and Evaluation at San Francisco Unified School District

00:36:04 Peggy King-Sears: Peggy King-Sears, George Mason University, aspiring PI :)

00:36:05 Alex Moore: Alex Moore, Virginia Tech School of Education

00:36:07 Avery Hennigar: Hello, my name is Avery Hennigar. I am a PhD candidate at the University of Maryland and a researcher intern with AIR.

00:36:07 Alayna Wearly: hello, i am Alayna. I am recent PhD graduate from UC, Santa Barbara

00:36:10 Kristin Tenney: Hello! I'm Kristin Tenney, I'm a doctoral student in Math Ed. at San Diego State

00:36:10 Susan Yoon: Hi all, Susan Yoon here PI on a few DRK12 projects

00:36:10 Alexa Barton: Hi Everyone! My name is Alexa Barton and I am a Doctoral Candidate at Florida International University.

00:36:12 Angela Dolan: Angie Dolan, graduate assistant at Western Kentucky University

00:36:12 GAYITHRI JAYATHIRTHA: I'm Gayithri Jayathirtha from Univ. of Penn., Philly. I am a project team member

00:36:13 Angela Lyle: Hi! I'm Angela Lyle, a research fellow at the University of Michigan

00:36:21 Huan Li: Huan Li, from NC A&T State

00:36:22 Travis Weiland: Hi I'm Travis Weiland an Assistant Professor at University of Houston

00:36:22 Scott Arnett: Scott Arnett, Western Kentucky University, Associate Professor

00:36:22 Qiyang Zhang: Hi, I am qiyang, a PhD student in education at Johns Hopkins.

00:36:24 Kevin Pelaez: Hello, Kevin Pelaez, San Diego State University, Math Ed PhD student :)

00:36:25 Sandra Kip: Sandra Kiplagat, PhD Candidate, Florida International University

00:36:25 Luis Morales-Navarro: Hi! I'm Luis Morales-Navarro, grad student @ UPenn

00:36:25 Mike Steele: I'm Mike Steele, Program Officer with the National Science Foundation and Professor of Mathematics Education at the University of Wisconsin-Milwaukee. (Aaron Price, your profile picture is fabulous!)

00:36:26 Yolanda Rankin: Hi, I'm Yolanda Rankin, an assistant professor at Florida State University. I am an aspiring PI for DRK-12.

00:36:26 Molly Faulkner-Bond: Hi, everyone! I'm Molly Faulkner-Bond, a senior research associate at WestEd. I'm the PI on a newly funded IES systematic review/meta-analysis grant.

00:36:26 Ann Jaquith: Ann Jaquith, Executive Director, SCOPE at Stanford University

00:36:27 Lisa Clough: Hi all- Lisa Clough from NSF

00:36:33 Paola Filigrana: Hi all! I'm Paola Filigrana, PhD in Epidemiology, working with Colombia Ministry of Health.

00:36:33 Yesim Sahin: I am Yesim Sahin, senior educational researcher at OneWorld Linguistic Consulting

00:36:34 Kathryn Hayes: Hi all, Kathryn Hayes from California State University, East Bay

00:36:39 Melissa Schropp: Hello! I'm Melissa Schropp, from Activate Research in D.C.

00:36:42 Hye Ryung Won: I am graduate students in early childhood at Florida State University

00:36:42 Sarah Frette: Hello, I am Sarah Frette, PhD student at Iowa State University and inspiring PI

00:36:43 Toni Dancstep: Hello all. This is Toni, from NSF.

00:36:46 Kate Miller: Hello, Kate Miller, PhD candidate at UPenn GSE, currently project manager on one NSF grant, and research participant in two others.

00:36:47 Rohit Mishra: Hi! I am master's student in Learning, Education and Technology program in University of Oulu, Finland. :)

00:36:56 Cathy Thomas: Cathy Newman Thomas, TXST University.

Previously, QuEST. Currently developing a proposal

00:36:59 Saalim Koomar: Hi all – I'm Saalim Koomar. I work with the EdTech Hub and Jigsaw Consult, based in London.

00:37:00 Billie Day: I'm Billie Day, PhD. Researcher at AIR in Naperville, IL.

00:37:02 McKenzie Meline: McKenzie Meline, a doctoral candidate from the University of Oregon.

00:37:04 S B: Hi. I am Shondricka Burrell, Assistant Prof at Duquesne Univ in Pittsburgh

00:37:08 Kim Freeman: Hello. Kimberley Freeman, Howard University PI

00:37:09 Melissa Demetrikopoulos: Melissa Demetrikopoulos, Institute for Biomedical Philosophy. External Evaluator on DRK-12. potential PI

00:37:10 Yanjiang Teng: Hi, all, I'm Yanjiang Teng, a program coordinator from Michigan State University

00:37:24 Kathrin Zippel: Hello, I am a professor of sociology, Northeastern University.

00:37:43 Ignatius Esene: Dr Ignatius Esene from Cameroon

00:37:46 Jooeun Shim: Hi, I'm Jooeun, Ed.D student in Upenn GSE, currently participating in NSF projects.

00:37:53 Beth Herbel-Eisenmann: Beth Herbel-Eisenmann, Professor at Michigan State University and currently on assignment at the National Science Foundation as a Program Officer in the Division for Research on Formal and Informal Learning.

00:38:02 Melissa Gilbert: Melissa Gilbert, Project Coordinator and Research Associate, Stanford Center for Opportunity Policy in Education

00:38:13 John Russell: Hi all, senior education researcher at Math for America

00:38:14 simone smith: Simone Smith, Assistant Professor at North Carolina A&T State U; Co-PI on (non DRK-12) NSF grants

00:38:16 Leanne Ketterlin Geller: Hi Everyone! I'm a professor at Southern Methodist University

00:38:20 Christa Haverly: Christa Haverly, postdoc at Northwestern University

00:38:26 Tarik Buli: Hi! I'm Tarik Buli a doctoral candidate at University of Maryland, College Park

00:38:29 Susan Gunn: Hello I am Susan Gunn Dean College urban Education at Davenport University

00:38:53 Roba Hrisseh: Is there a PP

00:38:54 Ayca Fackler: Ayca Fackler, The University of Georgia, Project Title: How Deep Structural Modeling Supports Learning with Big Ideas in Biology, PI: Daniel Capps

00:38:56 Hochieh Lin: Hi Everyone! My name is Hochieh Lin. I am a doctoral candidate from the Ohio State University :)

00:39:02 Roba Hrisseh: Is there a PPT available?

00:39:13 Beth Adams: Hello! Beth Adams, researcher from Southern Methodist University

00:39:33 Justice Walker: Hello all, Justice Walker here—Assistant Professor at The University of Texas at El Paso!

00:39:52 Arim Park: Hi I am Arim Park, Assistant Professor at North Carolina A&T State University!

00:42:34 Dr. Natalie Parker-Holliman: Hi, I am Natalie Holliman, K-12 Practitioner in Central Arkansas.

00:42:53 Deirdre Magnan (she/her): Hi everyone - Due to the fabulous turnout today, we're reserving webcam space for presenters only. Thanks for understanding!

00:47:26 Melissa Demetrikopoulos: Question: When submitting a syntheses proposal to DRK-12 how much of the review should be conducted prior to the grant submission.....in other words, if you are applying for funding to conduct the review, how far into the process should you be?

00:52:40 Justice Walker: Great question!

00:54:37 Sherry Clouser: How do you suggest "making public?"

00:55:02 Natalya Gnedko-Berry: When submitting for NSF funding, how should prior (and usually outdated) syntheses/meta-analyses be treated?

00:55:11 Sampath kumar Amaravadi: you can register the protocol

00:55:14 John Russell: double code the entire dataset, or enough of the dataset to build coder reliability?

00:55:45 Sonica Dhillon: PowerPoints will be archived on the CADRE website following the event - <http://cadrek12.org/resources/air-methodology-webinar-series-designed-drk-12-program>

00:55:56 Hochieh Lin: Do meta-synthesis and meta-analysis refer to different things?

00:56:28 Ignatius Esene: Thanks

00:56:51 Victor Ogharanduku: Can systematic review be done by a single researcher working alone?

00:57:05 Beth Herbel-Eisenmann: What role, if any, does researcher positionality play in the process?

00:57:09 Rob Ochsendorf: On how to handle prior meta-analyses in a proposal....it can sometimes work to your advantage in convincing readers that it is time for an updated synthesis study.

00:57:30 Rob Ochsendorf: Rob Ochsendorf (NSF Program Director)

00:58:36 Nick Moore: How do you go about budgeting for a systematic review for a client when it is challenging to estimate how many included studies there will be?

00:58:44 Brigitte Sánchez Robayo: If the SLR must be done by two people, then couldn't be a dissertation?

00:58:53 Rob Ochsendorf: Agree fully with Emily and Jeff here.

00:59:19 Cynthia Winston-Proctor: epistemological position: can you describe the one you are working from...as you provide these conceptual recommendations

00:59:56 Neida Ramos: Can we include review articles? or just original articles?

01:00:49 Sampath kumar Amaravadi: Prospero

01:00:57 Sampath kumar Amaravadi: joane briggs

01:01:04 Emily Tanner-Smith: @John Russell - we will address the issue of double coding in the second module today, so let's come back to this question

01:01:23 Dr. Natalie Parker-Holliman: I noticed this is being recorded; Will it be provided later for our 2nd viewing?

01:01:26 Sherry Clouser: Thanks for sharing ideas on making protocols public – sounds like these are also great places to get ideas for protocols as well.

01:02:10 Mike Steele: @Nick: From the standpoint of an NSF proposal, we would want to see some initial pilot or pre-pilot work done that communicates about how many studies one would estimate to be in the target set, the time needed to review and code per study, and an estimate of the additional analysis time. The DRK-12 solicitation provides for a budget of up to \$600,000 and up to 3 years for a synthesis proposal.

01:02:29 Mike Steele: –Mike Steele, NSF Program Officer

01:02:41 Sonica Dhillon: @Dr. Natalie – Yes, the webinar is being recorded and will be archived on the CADRE website.

01:03:28 Dr. Natalie Parker-Holliman: Thank you!

01:04:22 Emily Tanner-Smith: @ Beth Herbel-Eisenmann – researcher positionality is an important consideration as you assemble your review team (to ensure coverage of relevant different stakeholders) and can also be used to inform the types of questions/aims you intend to address in the review

01:05:41 Emily Tanner-Smith: @Nick Moore – using scoping reviews during the proposal development stage is essential to estimate how many included studies there will be. This is why it is also important to have an experienced systematic reviewer on your team to ensure you can budget appropriately.

01:06:36 Emily Tanner-Smith: @ Hochieh Lin: meta-synthesis refers to synthesizing qualitative data from studies whereas meta-analysis refers to synthesizing quantitative data (using statistical synthesis methods).

01:07:59 Joseph Morris: When teaching meta-analysis to students or introducing the technique to researchers -- how do you guide the decision-making process as far as whether it's appropriate to do a systematic review/meta-analysis as opposed to something like a scoping review or expanded literature review?

01:07:59 Sherry Clouser: @Emily I was wondering about qual vs. quant – thank you for that distinction!

01:08:01 Qiyang Zhang: What are the two textbooks?

01:08:18 Nick Moore: How would you approach the analysis for a broad intervention effectiveness SR with a range of different outcomes of interest, e.g. effects of road investment on health, economic and education outcomes, while avoiding a "death by forest plot/ meta-regression output" situation

01:08:50 Sampath kumar Amaravadi: what kind of proposals can be submitted to DRK-12 ?

01:09:06 Wenjing Bao: Screenshot of recommended textbooks attached

01:09:14 Shuguang/Sophia Wang: Thank you Wenjing!

01:09:22 Melissa Rasberry: Here are the recommended resources: Borenstein, M., Hedges, L. V., Higgins, J. P., & Rothstein, H. R. (2011). Introduction to meta-analysis. Chichester, UK: John Wiley &

Sons.

Cooper, H., Hedges, L. V., & Valentine, J. C. (Eds.). (2019). The handbook of research synthesis and meta-analysis (3rd ed). New York: Russell Sage Foundation

01:09:28 Wenjing Bao: you're welcome

01:09:33 Qiyang Zhang: Thank you Wenjing and Lelissa

01:09:36 Qiyang Zhang: Melissa

01:10:34 GAYITHRI JAYATHIRTA: I understand that meta-analysis is discussed in terms of quantitative studies. I wonder, as we move forward, if we can speak to how some key points translate to the case when the studies synthesized are mainly qualitative, at best mixed methods with descriptive statistics.

01:10:57 Nick Moore: Thanks!

01:10:58 Rob Ochsendorf: <https://www.nsf.gov/pubs/2020/nsf20572/nsf20572.htm>

01:11:32 Christa Haverly: Along the lines of bias, what do you recommend doing with studies that use deficit-laden language/viewpoints that surface in the review? How to report on these findings without perpetuating deficit perspectives?

01:12:13 Beth Herbel-Eisenmann: Great question, @Christa Haverly!

01:12:18 Rob Ochsendorf: DRK-12 is a research and development program focused on improving preK-12 STEM education, including computer science discipline as well.

01:12:26 Seth Christopher Yaw Appiah: is the DRK DRK-12 available to only those within the USA or its a global call?

01:13:17 Joseph Morris: Thanks so much!

01:13:37 Rob Ochsendorf: DRK-12 (and NSF) grants are generally made to US institutions, yes. But there are often international collaborations that are possible.

01:16:17 Rob Ochsendorf: Should mention that other programs at NSF also accept these kinds of proposals. ECR, AISL, IUSE, to name a few. I encourage you to find the program that fits with your research goals.

01:19:15 John Russell: this is a fantastic slide - so clear the work that goes into this. Do you all recommend particular reference manager software that easily allows multiple people to see the same references?

01:20:08 Sabina Singh: As you mentioned about a 4 week long workshop for learning search strategy, could you kindly share a book or refer to internet sources for self-learning? thanks.

01:21:12 John Russell: how much of gray literature is also about looking at the citations of the primary sources that you find?

01:21:45 Kristin Fisher: What are best or recommended methods/habits for documenting all steps as you work in such a big team?

01:22:46 Peggy King-Sears: I would think hand searches would become repetitive if journals are in the databases that were searched. Reaction to this?

01:24:14 Mike Steele: @Christa: Regarding deficit language, that's a difficult issue. I would recommend in the publication of the

synthesis, being very clear up front about how you are labeling a construct (with non-deficit language) and the types of deficit language previously used that may fit into that category. I'd also recommend careful text styling/annotations that clearly indicates where language is borrowed from source studies (and may reflect deficit framings) and where the language belongs to your team.

01:25:39 Hye Ryung Won: For the keyword search in databases, since STEM is an acronym of the four (Science, Technology, Engineering, and Mathematics), I feel tricky to set up the right keywords for searching. Do you recommend to retain only the term 'STEM' or putting all the word combination of 'Science, AND Technology, AND Engiering, AND Mathematics'? The problem is if I put all the combinations, the search result becomes huge.

01:27:31 Christa Haverly: @Mike – thank you for these recommendations – they're really concrete and helpful. I would also add that studies using deficit language may well have deficit-based perspectives in their analyses also. This adds additional complexity and tension when synthesizing the research literature.

01:28:33 Rob Ochsendorf: @Hye Ryung STEM is probably a bit broad for a single synthesis study (unless you are narrowing quite a bit by other parameters e.g., gender, community college, for example). Would depend on your question and focus. Thanks!

01:29:18 Hye Ryung Won: Thank you!

01:29:19 Rachel Lambert: Can you explain more about “code items at the highest level of measurement?”

01:30:27 Yasemin CopurGencturk: Can you tell us more how to deal with multi-report studies? Should we include all of these studies?

01:30:35 Nick Moore: In your experience, what is the most efficient approach for dealing with multi-report studies?

01:31:55 Melissa Rasberry: Campbell Collaboration (n.d.).

Evidence synthesis tools for Campbell authors. <https://campbellcollaboration.org/research-resources/resources.html>

Center for Evidence Synthesis in Health (n.d.). Software. <https://www.brown.edu/public-health/cesh/resources/software>

Higgins, J. P. T., Thomas, J., Chandler, J., Cumpston, M., Li, T., Page, M. J., & Welch, V. A. (Editors) (2019). Cochrane handbook for systematic reviews of interventions, version 6.0 (updated July 2019). Cochrane. Available from [www.training.cochrane.org/handbook](http://www.training.cochrane.org/handbook)

Kugley, S., Wade, A., Thomas, J., Mahood, Q., Jorgensen, A-M. K., Hammerstrom, K., & Sathe, N. (2017). Searching for studies: A guide to information retrieval for Campbell systematic reviews. Campbell Systematic Reviews, 13, 1-73. <https://doi.org/10.4073/cm.2016.1>

PRISMA (n.d.). Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) website. <http://www.prisma-statement.org/>

01:33:21 Ignatius Esene: When is the next webinar?

01:33:22 John Russell: methodology slide

01:33:26 Melissa Gilbert: Slide 41

01:33:48 Alayna Wearly: @ignatius <http://cadrek12.org/announcements/air-webinar-series-systematic-literature-reviews-and-meta-analytic->

techniques

01:34:02 Alayna Wearly: sept 28

01:34:43 John Russell: thank you! I love Mendeley, but see the collaborative part being the trickiest issue with it (and similarly with Endnote)

01:36:51 Yolanda Rankin: Thank you for the great presentation. It was very informative.

01:37:50 Mary Baez: Can you show the second to last slide again?

01:38:41 Sarah Rand: We will post the recording and PPT from the webinar today here: <http://cadrek12.org/events/%5Byyyy%5D/%5Bmm%5D/%5Bdd%5D/webinar-1-introduction-systematic-literature-reviews>

01:38:52 Beth Adams: Can you elaborate on why including only peer-reviewed journal articles is a red flag? Where do you draw the line on types of dissemination outlets?

01:39:17 Bala R: Would you also post the chat? There were some informative questions and answers here.

01:39:46 Eva Thanheiser: If you click on file you can download the chat to your desktop

01:39:48 Victor Ogharanduku: Is there a threshold of the number of studies that can be included in the systematic review.

01:39:57 Sarah Rand: @Bala- I will look into posting the chat as well

01:40:04 Bala R: Thanks so much

01:40:28 Julie Johnson: The "download chat" option appears to be disabled.

01:40:34 John Russell: Thank you Sarah - and a big thank you to Emily and Jeff for a really fantastic presentation.

01:40:43 Melissa Gilbert: @Sarah, you can usually get the chat and audio transcript with a Zoom recording.

01:41:13 Sherry Clouser: Thanks for a great session! I look forward to the next one.

01:41:59 Jasmine Kim: Great question. Victor! Opposite to Victor's question, my question is what the minimum numbers of studies that a paper has to include is. Thank you!

01:42:24 Bala R: Thank you Jeff and Emily for a great presentation. I found it pointed, full of relevant resources, and well structured. I look forward to the next one.

01:43:17 Yasmin Kafai: Clarification of distinction between scoping reviews, meta synthesis and other terms would be appreciated.

01:44:02 John Russell: did you do a systematic review of systematic reviews to see how many pieces they each pulled :)

01:45:22 Jasmine Kim: Thank you, Dr. Valentine!

01:45:41 Cathy Thomas: Can you report common and unique findings rather than do a vote count that is biased/subjective?

01:46:39 Aynura Berdyeva: Please complete a feedback survey here: <http://www.surveymshare.com/t/Systematic-Literature-Reviews>

01:47:33 Sarah Rand: <http://cadrek12.org/events/%5Byyyy%5D/%5Bmm%5D/%5Bdd%5D/webinar-1-introduction-systematic-literature-reviews>

01:47:42 Molly Faulkner-Bond: Thank you very much to the presenters!



01:48:03 Sampath kumar Amaravadi: Thank you very much  
01:48:07 Peggy King-Sears: Thank you. Very valuable information provided. Good consolidation :)  
01:48:16 Natalya Gnedko-Berry: Excellent presentation. Thank you.  
01:48:18 Beth Herbel-Eisenmann: Thank you!  
01:48:20 Brigitte Sánchez Robayo: thank you!  
01:48:20 Fany Salazar: Thank you!  
01:48:21 Karen Omohundro: thank you  
01:48:21 Rob Ochsendorf: Thanks!  
01:48:21 Cathy Thomas: Thank you!  
01:48:22 Yasmin Kafai: Thanks!  
01:48:22 Shuguang/Sophia Wang: Thank you so much!  
01:48:24 Sabina Singh: Thanks!  
01:48:24 Ilana Umansky: Thank you!  
01:48:24 Luz Minaya: Thank you so much!!  
01:48:25 Yesim Sahin: Thank you!!  
01:48:26 Deniz Ozen Unal: Thank you!  
01:48:26 ahmed trabelssi: thanks  
01:48:27 Mary Baez: Thank you  
01:48:29 Reagan Mergen: Thank you!  
01:48:29 Dorcas Hinson: Thank you  
01:48:30 Melissa Gilbert: Thank you!  
01:48:31 Luis Morales-Navarro: Thank you!  
01:48:32 Betina O'Hara: Thank You!  
01:48:33 Judi Fusco: Thanks!  
01:48:33 Fernando Guerra: Thank you!  
01:48:34 Danielle Guzman-Orth: Thank you!  
01:48:35 Barbara Ettenauer: Danke!  
01:48:43 Hye Ryung Won: Thank you!  
01:48:46 Jair Arciniegas: Thank you  
01:48:49 Victor Ogharanduku: Thanks so much Jeff, Emily and Melissa  
01:48:52 Fernando Guerra: Gracias!  
01:48:54 Hochieh Lin: thank you very much!  
01:49:17 Neida Ramos: thaks  
01:49:29 Sibel inci: thank you it was so useful for me  
01:49:30 Neida Ramos: cadre12.org?  
01:49:38 Sarah Rand: <http://cadrek12.org/events/%5Byyyy%5D/%5Bmm%5D/%5Bdd%5D/webinar-1-introduction-systematic-literature-reviews>