Day 1: Advancing Data-Intensive Research in Education

Day #1 of an NSF-funded Computer Research Association workshop in Rosslyn VA

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craig wiggins
@oxala75

Quote from some pre-conference meeting reading material: "[t]he rise of machines is...inevitable and just as indifferent to your hatred."

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craig wiggins
@oxala75

I'm attending the @CRAtweets Workshop on Advancing #Data-Intensive Research in Education. I'm hereby making up the hashtag #CRADATA #first

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craig wiggins
@oxala75

...so I'll be posting things from the event fairly regularly today & tomorrow. If you're not interested in #bigdata in education....sorry?

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craig wiggins
@oxala75

here's the agenda for #CRADATA: cra.org/events/big-dat...

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craig wiggins
@oxala75

This is actually the second @NSF-funded @CRAtweets workshop #CRADATA
The first one was focused on case studies of effective partnerships outside of education between big data producers and consumers #CRADATA

Today and tomorrow is about case studies of big data usage in education, building on insights from the first workshop #CRADATA

no mistake - this is a lot about data being used to improve outcomes in #STEM education initiatives. But there's more #CRADATA

also, just to let you know, we all read a 130-page briefing book before attending the event. Not gonna lie: was very helpful #CRADATA

I'll see if I can share the #data workshop briefing book with you all later - some good stuff in there #CRADATA

0830-0850: Welcome
@JoanFerriniMund kicks us off #cradata pic.twitter.com/dU7aimi54I

CRAIG WIGGINS @OXAL75 · 2 DAYS AGO

C. Laubenthal
@Phbob

Joan: Sharing data sets & creating data sets designed for sharing. Need to help communities and leaders prepare for that movement. #CRADATA

2 DAYS AGO

C. Laubenthal
@Phbob

Joan: Constantly focus on scaling stat methods, developing new stat methods, and, in general, pushing to find new ways to learn. #CRADATA

2 DAYS AGO
0850-0900: Purposes and Processes of the Workshop
Chris Dede is next to speak, he is the face of the workshop, its organizer (among other important roles). Recognizes team effort. #CRADATA

2 DAYS AGO

Dede: Each of us have a piece or two of the "elephant." We have very diff pieces, but none in this room knows what the elephant is #CRADATA

2 DAYS AGO

STEM is not just a big data domain, it is a diverse data domain. @JoanFerriniMund at #CRADATA. Hope we include qual: insidehighered.com/blogs/higher-e...
@chris_dede, #CRADATA organizer, sets the tone. Interestingly, we’re here to talk to each other, not make presos pic.twitter.com/aHigi7r1YM

CRAIG WIGGINS @OXALA75 · 2 DAYS AGO

C. Laubenthal
@Phbob

Dede: "Reason for putting the elephant together...Where are we going?...Beyond [this]...To provide field advice [on what works]." #CRADATA

2 DAYS AGO

C. Laubenthal
@Phbob

Dede: "Each form of data imposes its own structure as to what's possible and not possible.” #CRADATA

2 DAYS AGO
0900-1000: NSF's Role in Advancing Data Science

craig wiggins
@oxala75

now up: Taylor Martin presenting #Data Science for Social Good #CRADATA

C. Laubenthal
@Phbob

Taylor Martin, Data Science for Social Good cases for use. 1st is poverty alleviation in rural sub-Saharan Africa & @Give_Directly #CRADATA
Right into it - talking about data science to ameliorate conditions in sub-Saharan Africa #CRADATA

@oxala75

2 DAYS AGO

#data collection is thin, unobtrusive (discovering what is potentially personal from what is non-personal data) #CRADATA

@oxala75

2 DAYS AGO

Use targets & maps of highest dens of metal roofs per village Data collect thin, but unobtrusive (personal not from personal data) #CRADATA

@Phob

2 DAYS AGO

Algorithms for moving us from more structured situations to more personalized learning and effective ed interventions #CRADATA

@oxala75

2 DAYS AGO

interesting terminology for courses that are not online: "on the ground" #CRADATA My #ISD people: we should adopt this.

@oxala75

2 DAYS AGO

ooh ooh new acronym #OTG #CRADATA

@oxala75

2 DAYS AGO
C. Laubenthal
@Phbob

Another example, @SummitPS, doing a great job integrating data into its institution decision-making including college persistence. #CRADATA

2 DAYS AGO

George Siemens
@gsiemens

mentioned at #cradata: Stealth Assessment myweb.fsu.edu/vshute/pdf/Ste...

2 DAYS AGO

Hobsons
@Hobsons

Excited to be at #CRADATA today. @dyaskin will be speaking today at 10:15 with @edwsonoma. ow.ly/NHV3I @PARFramework @Starfish360

2 DAYS AGO

C. Laubenthal
@Phbob

[Taylor reintroduces the idea that there needs to be meta models, so that a new theory does not need to be generated each tool.] #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

data tools (from Wisconsin): adageapi.org/applications.h... #CRADATA #unity3d

2 DAYS AGO
Big data mtg launched by @chris_dede after EHR head @JoanFerriniMund, in foreground, welcomed us from #NSF. #CRADATA pic.twitter.com/eCx6b9dQJM

@craiggiggins @oxala75

hm... @TuvaLabs #datavisualization tuvalabs.com #CRADATA

C. Laubenthal @Phbob

Biggest challenges: few integrated data sources, not enough knowledge sharing abt data sources, teachers being human AI. #CRADATA
craig wiggins
@oxala75

Taylor Martin says that when she talks to #edtech folks about #dataviz, they're like "why do I have to be a human AI?" #CRADATA

2 DAYS AGO

Computing Research
@CRAtweets

"Think about the new questions that could be pursued" -Joan Ferrini-Mundy at the start of the CRA @NSF_EHR Advancing Data Workshop. #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

"...i mean, does this #datavisualization tell my why this student is behaving this way?: What about options?" #CRADATA

2 DAYS AGO

Jim Harris
@JimDHarris

@oxala75 Craig - any chance of some photo/ screenshots from the event please?

2 DAYS AGO

craig wiggins
@oxala75

@JimDHarris I'll ask, Jim. I don't want the @NSF or @CRAtweets to red card me :) #CRADATA

2 DAYS AGO

C. Laubenthal
@Phbob

Culture change is req, but difficult in ed and data. There is a pressing desire to accomplish this now, but it needs to be right. #CRADATA

2 DAYS AGO
"We are building a new field, it is going to take awhile" - Taylor Martin @NSF_EHR #CRADATA

#CRADATA pic.twitter.com/npDWEQlhN

CRAIG WIGGINS @OXALA75 · 2 DAYS AGO

Craig wiggins @oxala75

Plant genomics data issues: Multi-decade plans, developed & actualized across the entire scholarly community #CRADATA

2 DAYS AGO
Singer illustrating variety of big data use plant genomics & difficulty of ontology. "How do we get a Ed common lingo to do this?" #CRADATA

Susan Singer @NSF Importance of #bigdata topology-Volume Velocity Variety Veracity & Visualizations 4 #STEM #CRADATA pic.twitter.com/w5ejZ93Fpm

Plant genomics problem number 2: lots of different names for the same plants. Complicates relationship mapping & data entry #CRADATA
in plant genomics, evolution of data interoperability and standards were crucial to success #CRADATA

equiv in ed? massive amounts of learning data that could be collected from MOOCs, intelligent tutoring systems & digital platforms #CRADATA

issues in data collection and management = the 4 Vs: veracity, volume, velocity & variety #CRADATA

The challenge of variety is its reach, million details & slight changes. This is overcome w/use of shared space & common terms. #CRADATA

fun fact: the @NSF's iPlant Collaborative (iplantcollaborative.org) has a storage capacity of 427 terabytes #CRADATA

that's a lot of genetic data strings #CRADATA
C. Laubenthal
@Phbob

How big is big data? #CRADATA

2 DAYS AGO

C. Laubenthal
@Phbob

"Efficiency in scientific discovery through curation, analyses and interpretation of massive datasets. But what is massive?" #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

whoops - we're on to Gul Kremer, who's talking about something that I've been thinking, esp in regards to ed: "how big is #bigdata" #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

(cuz honestly, as @MMTorrance reminded me last week, #bigdata in learning and education at the corporate level is really "big-ish") #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

"Big data consists of extensive datasets primarily in the characteristics of volume, variety, velocity, variability" #CRADATA

2 DAYS AGO

C. Laubenthal
@Phbob

"Big data consists of extensive datasets primarily in the characteristics of volume, variety, velocity, and/or variability ..." #CRADATA

2 DAYS AGO
C. Laubenthal
@Phbob

...that require a stable architecture for efficient storage, manipulation, and analysis.
#CRADATA

2 DAYS AGO

craig wiggins
@oxala75

we are currently considering cases from earth science, biology, health, astronomy & computer science #CRADATA

2 DAYS AGO

#CRADATA pic.twitter.com/DuBmWvA0Us

CRAIG WIGGINS @OXALA75 · 2 DAYS AGO
C. Laubenthal
@Phbob

Http://www-1.ibm.com/software/data/... #CRADATA

2DAYS AGO

Craig Wiggins
@oxala75

LSST -> large synoptic survey telescope (the astronomy case study) #CRADATA. 20-40 petabyte (!) img archive #CRADATA

2DAYS AGO

Craig Wiggins
@oxala75

big issue in climate modeling: data pushing both computational & storage limits. We need waaaay more resolution (1.5 petaflops!) #CRADATA

2DAYS AGO

Craig Wiggins
@oxala75

back to astronomy: one 6 gigabyte img every 20 seconds. you know what offsets the huge need to eyeballs on data? citizen scientists #CRADATA

2DAYS AGO

C. Laubenthal
@Phbob

Someone just mentioned a petabyte of data. Looked it up, "1015 bytes of data, 1,000 terabytes (TB) or 1,000,000 gigabytes (GB)." #CRADATA

2DAYS AGO

Craig Wiggins
@oxala75

another place where we need a lot more processing and manip: infectious disease tracking and #dataviz #CRADATA

2DAYS AGO
C. Laubenthal
@Phbob
At a loss for words to describe the coolness of super large, data projects. #wow #justwow #CRADATA

2 DAYS AGO

craig wiggins
@oxala75
Don’t even get me stated on the kind of data that topography pours in. #CRADATA

2 DAYS AGO

Computing Research
@CRAtweets
See the four Vs of Big Data! #CRADATA ibmbigdatahub.com/infographic/fo...

2 DAYS AGO

craig wiggins
@oxala75
of course, thinking of healthcare data, one of the things sort of holding back wholesale manip of data are privacy laws/concerns #CRADATA

2 DAYS AGO

Ellen Wagner
@edwsonoma
lots of reference to your work in our first session at #CRAdata today, @KirkDBorne.

2 DAYS AGO
Hey, check this out: cpc.ucar.edu/products/SC/ #CRADATA #NMME #datavisualization

.@AndrewDeanHo the ultimate goal in working w #bigdata is generalizability #CRADATA

Elizabeth Burrows (to @AndrewDeanHo): "yeah - no need for #bigdata for big data's sake. Really." #CRADATA
C. Laubenthal
@Phbob

Q: Can you incentivize bigness WHILE incentivizing reason? A: It's a process, there always has to be reason, but it takes resource. #CRADATA

2 DAYS AGO

C. Laubenthal
@Phbob

This was one of the very cool projects mentioned in the presentation: bit.ly/1PZDNhW. #CRADATA

2 DAYS AGO

C. Laubenthal
@Phbob

Q: Ed terminology presents unique challenges (Math in CA seems to be diff than math in AL)? A: Tech isn’t there, working on it. #CRADATA

2 DAYS AGO

C. Laubenthal
@Phbob

Another article on petabyte: computerweekly.com/feature/What-d... #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

someone asks if there’s a Learner Genome project...so yeah, learner profiles. I bring up #xAPI, naturally #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

I warn that big data is going to come from ed when we focus on performance, not learning #xAPI #CRADATA

2 DAYS AGO
Ellen Wagner
@edwsonoma

@oxala75 good to see you across the room at #cradata :-)

2 DAYS AGO

.CRAIG WIGGINS @OXALA75 - 2 DAYS AGO

C. Laubenthal
@Phbob

Audience: Need cognitive task analysis, need to avoid the idea that there is an elixir from an education genomic project. #CRADATA

2 DAYS AGO

Andrew Ho
@AndrewDeanHo

In psychometrics, the ultimate "V" is "Validity," of the uses and interpretations of metrics (Kane, 2013) onlinelibrary.wiley.com/doi/10.1111/je... #CRADATA

2 DAYS AGO
Susan Singer had a really good analogy about genes and soybeans and the equiv in education...man, u had to be here #CRADATA

"design your #data sets w/data collection in mind" i mean, that sounds so simple and smart. No wonder we don't do it in ed :) #CRADATA

science in data "went down the reductionist rabbit hole": data first, questions later. Education needs questions first #science #CRADATA

that last bit came from an exchange between @NSF's Susan Singer & @NCState's @JereConfrey #CRADATA

Q: Analyze by question or evol of questions? A: Currently, not considered, but happy to revisit. Let’s go data, theory, then app. #CRADATA

At #CRADATA today, @dyaskin will be speaking on Predictive Models in #highered today at 10:15 with @edwsonoma! @PARFramework @Hobsons
C. Laubenthal
@Phbob

Audience: This discussion is fantastic, but physiology, politics, and culture are important to any big data implementation. #CRADATA

2 DAYS AGO

C. Laubenthal
@Phbob

Audience: The more data you have the more quickly your model will crash and fail. #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

guys, the #bigdata cred in this room... well, I don’t have my its_huge.gif ready,. But trust me. #CRADATA

2 DAYS AGO
1015-1115: Predictive Models based on Behavioral Patterns in Higher Education

C. Laubenthal
@Phbob

Chris: Less ambiguity of grain size when dealing with predictive models, the outcomes are more clearly defined, diagnostics easier. #CRADATA

2 DAYS AGO

C. Laubenthal
@Phbob

Ellen Wagner is up talking about the PAR framework on predictive modeling in behavioral patterns. #CRADATA

2 DAYS AGO
@edwsonoma talks predictive models based on behavioral patterns in higher ed #cradata pic.twitter.com/JaoK8fnXak

CRAG WIGGINS @OXALA75 2 DAYS AGO

Natalie Harr
@nharr23

Excited to be at CRA's 2 day workshop on Data-Intensive Research in Education in Arlington. So many dynamic presenters! #CRADATA @NSF_EHR

2 DAYS AGO

C. Laubenthal
@Phbob

Ellen: the score card push, illuminated the need for data that describe all of the college (drop outs, military, part time). #CRADATA

2 DAYS AGO
Performance Based Funding and US Post-Secondary Institutions

#cradata pic.twitter.com/qJffEpCqOqd

CRAIG WIGGINS @OXALA75 · 2 DAYS AGO

you know @edwsonoma, right? parframework.org #CRADATA

2 DAYS AGO
Getting ready for our #CRADATA discussion: “Predictive Models Based on Behavioral Patterns in HigherEd” @dyaskin pic.twitter.com/4lBakBSpD3

@HOBSONS - 2 DAYS AGO

C. Laubenthal
@Phbob

Ellen: a technology trigger or a novel solution to wicked problem? #CRADATA

@HOBSONS - 2 DAYS AGO

craig wiggins
@oxala75

so yeah, the US has moved from 12th to 11th place education-wise. Meanwhile US ed tech companies are eating well #CRADATA

@HOBSONS - 2 DAYS AGO
disclaimer: i am one of those well-fed folks :) #CRADATA

oh hey, i met @siemens in person finally. Managed not to fanboy out #CRADATA #goals

the PAR framework uses (only!) 77 distinct variables. Why? Everybody has to be able to input the same data #CRADATA

PAR only uses 77 variables, but they selected only those variable that every of their 351 campuses could get for every student. #CRADATA

the PAR game changer: common #data definitions #CRADATA

PAR formative data was not pulled from LMSes. Why? Those of you who work with an #LMS know why #data #interoperability #CRADATA
there are too many interesting things happening in DC today! :-) #CRDATA #CIC15 #GCTC2015 twitter.com/michebox/statu...

@oxala75 haha. was good to finally meet in person! #crdata

#crdata pic.twitter.com/6rRzgBoRWV

CRAIG WIGGINS @OXALA75 · 2 DAYS AGO

@edwsonoma "prediction w/o action...is [bad]" #CRDATA

2 DAYS AGO
Reflections on 4 Years in the Learner Analytics Trenches

- Infrastructure matters, but EXOSTRUCTURE matters more.
- Scale requires reliable, generalizable outcomes and measures that can be replicated in a variety of settings with a minimal amount of customization. In the case of PARL, common definitions and look-up tables served as a “Rosetta Stone” of student success data, making it possible for project to talk to one another between and within projects.
- Using commercial software stacks already in place on campuses and data exchanges to extend interoperability with other IPAS systems extend value and utility of tech investments.

Part 2 #cradata pic.twitter.com/todbyi893v

@CRAIG WIGGINS @OXAL75 - 2 DAYS AGO

craig wiggins
@oxala75

"Infrastructure matters, but EXOSTRUCTURE matters more." - @edwsonoma #CRADATA

@ oxala75 - 2 DAYS AGO

C. Laubenthal
@Phob

David Yaskin: Half the students who start college do not finish. #CRADATA

@ oxala75 - 2 DAYS AGO

craig wiggins
@oxala75

sorry forgot to mention: this panel is composed of @edwsonoma + @dyaskin. David is from starfish:360. You better ask somebody #CRADATA

@ oxala75 - 2 DAYS AGO
I think we have entered the infomercial portion of the agenda. #cradta

first-gen college entrants really need help with student services, and they have few templates or understanding their value #CRADATA

was good to talk to @dyaskin about #xAPI prior to now hearing his remarks about @Starfish360 (so that I dont have to pelt him w/?) #CRADATA
#cradatapic.twitter.com/7xcNkkNpg8

CRAIG WIGGINS @OXAL75 · 2 DAYS AGO

craig wiggins @oxala75

both @edwsonoma + @dyaskin have me musing on some things regarding predictive #analytics #CRADATA

2 DAYS AGO

George Siemens @gsiemens

the issue I have with #learninganalytics is that the conversation is almost exclusively about solutions to ill-defined problems. #cradat

2 DAYS AGO
Jane Bozarth
@JaneBozarth

@gsiemens and too often examination by autopsy #cradata

2 DAYS AGO

George Siemens
@gsiemens

the focus is on "now you know who leaves early" ok. Great. now what? That's BI, not #learninganalytics #cradata.

2 DAYS AGO

#cradata pic.twitter.com/dsYcQK9hb

CRAIG WIGGINS @OXALA75 - 2 DAYS AGO
C. Laubenthal
@Phbob

David: on challenges, more colleges need similar systems that are holistic and open.
#CRADATA

@JaneBozorth @edwsonoma @dyaskin #CRADATA pic.twitter.com/uNnZ4hCOQI

CRAIG WIGGINS @OXALA75 - 2 DAYS AGO
"This is where predictive analytics come in: you need heuristics to know what to pay attention to."
#CRADATA pic.twitter.com/OkhFzRwycr

- HOBSONS  @HOBSONS - 2 DAYS AGO

- craig wiggins  @oxala75

. @LinkedIn + something like PAR, maybe? #CRADATA

- 2 DAYS AGO

- craig wiggins  @oxala75

the PAR = "adaptive learning for institutions" - @edwsonoma #CRADATA

- 2 DAYS AGO
@edwsonoma Really!! I would love to know more. How on earth did I miss this #CRAdata event? :(

2 DAYS AGO

@oxala75 Can you share that briefing book? or is it confidential?? #CRAdata (Wish I was there!!!)

2 DAYS AGO

craig wiggins
@oxala75

@KirkDBorne it’s publicly available via a link on this page: cra.org/events/big-dat...
#CRADATA

2 DAYS AGO

craig wiggins
@oxala75

tweeting text from my Chromebook and tweeting pics from my phone at the same time #logjam
#CRADATA

2 DAYS AGO

craig wiggins
@oxala75

what's working? "coaching" says @dyaskin - getting a student to someone that can figure them out + who knows what school can do #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

in effect, things like @Starfish360 or the PAR work to get institutions to know what to do, which is often be more effing human #CRADATA

2 DAYS AGO
L2R Ellen Wagner-David Yaskin-Chris Dede Ellen-PAR predictive analysis, David-Starfish Retention intervene #CRADATA pic.twitter.com/LrjBLxGnPm
What needs to change? #CRADATA @dyaskin pic.twitter.com/IYb9QIDVLO

@craig wiggins
@oxala75

i mean, the whole process of successfully transferring a student? needs guard rails and better care #CRADATA

2 DAYS AGO

@craig wiggins
@oxala75

i like this focus on educational services vs. pedagogy #CRADATA

2 DAYS AGO
performance <-- helping people reach their goals <-- what exactly are your goals, btw? Dexter Fletcher, basically #CRADATA

funny that no one has called out trade schools, certifications or competency frameworks after Dexter's comment #CRADATA

"models go to institutional research to die" - people need to be able to use data; needs to be demystified (via @edwsonoma) #CRADATA

.@edwsonoma says that we - education - didn't really start talking about #bigdata until 2009 #CRADATA

im sure y'all knew about this www2.ed.gov/about/offices/... #CRADATA

aargh i can’t tweet fast enough to catch the exchange on A/B testing that just happened :-/ #cradata
hey, @PalantirTech is here at #cradata

"today sees explosion of data sources, not just data records" - dude from @PalantirTech #cradata #xAPI folks, that's activity providers

Una-May O'Reilly (MIT): is this really predictive analytics? #cradata

sorry, that's @UnaMayMIT #cradata

1115-1230: Dialogue on Privacy, Security, and Ethics

up next: the privacy panel ::rolls up sleeves:: #CRADATA

@oxala75 hey, what is #cradata this looks like a super relevant and interesting event...
craig wiggins
@oxala75

@earino it's this: cra.org/events/big-dat... - an @NSF + @CRAtweets event re #bigdata in education #cradata

2 DAYS AGO

George Siemens
@gsiemens

Just mentioned: The architecture of privacy shop.oreilly.com/product/063692... #cradata

2 DAYS AGO

Book coming from @alephbass #cradata pic.twitter.com/XRMHVUjbnP

CRAIG WIGGINS  @OXALA75  2 DAYS AGO
#CRADATA privacy panel: @UnaMayMIT, @alephbass (aka dude from @PalantirTech), @pkhammar and @stout_ethics (Elizabeth Buchanan)

@alephbass: "ppl argue very passionately about their kids' privacy data being used by ed software. They argue via Facebook..." #cradada

you're gonna need a bigger boat #xAPI #CRADATA twitter.com/edpublishers/s...

potential harm vs probability of harm (of data privacy). Guess which one we write think pieces about :-/ #cradada

legislation is being written by people who don't know what this data is for, what is likely to happen, etc. - @alephbass #CRADATA

Predictive analytics panel discussion at #cradada: First term GPA is a strong predictor of college completion; SAT scores, not so much.
just...you know that tech has outstripped legislation, right? just think of ALPR (automatic license plate readers) #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

when we thought only human police would be able to check license plates, the manpower restrictions on collecting data was the check #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

but now that we can see it all, all the time, now our legislation seems anemic to defend us #CRADATA

2 DAYS AGO

George Siemens
@gsiemens

Listening to a talk by @PalantirTech on privacy and ethics. Most people have no idea how much data is being collected. #cradat

2 DAYS AGO

craig wiggins
@oxala75

the smart: don't give people data - invite them to play in your data playground. They can play, but not take the data away #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

data privacy standards - we need them in order to get to sharing data. How do we do that? #CRADATA

2 DAYS AGO
craig wiggins
@oxala75

up now: @UnaMayMIT with "educational big data and the digital learner" #CRADATA

2 DAYS AGO

George Siemens
@gsiemens

up next: Una May O'Reilly on Privacy and Access Considerations in Educational Big Data. She's Canadian (at @MIT) and highly awesome #cradata

2 DAYS AGO

craig wiggins
@oxala75

@UnaMayMIT works with the ALFA MOOCdb project: groups.csail.mit.edu/EVO-DesignOpt/... #CRADATA

2 DAYS AGO
#cradata pic.twitter.com/NkrUy8smfo

@OXALA75

CRAIG WIGGINS

MOOCdb Project @mjsamberg #CRADATA moocdb.csail.mit.edu

@sbkellogg

Shaun Kellogg

2 DAYS AGO

2 DAYS AGO

so, @UnaMayMIT has been working to get #MOOC data. First hurdle: getting people to freaking share (privacy concerns) #CRADATA

2 DAYS AGO
student (the prime stakeholder!) gives data (via the privacy policy) to MOOCdb, gets learning services back #CRADATA

2 DAYS AGO

Do "predictive analytics" even need to be accurate to have effects? Or are predictions just a hook to inspire effective treatments? #CRADATA

2 DAYS AGO

If you're interested in the education big data workshop, follow @oxala75. He's doing a stellar job live tweeting resources/topics. #crad

2 DAYS AGO

@gsiemens #CRADATA pic.twitter.com/CKTiHZxKic

2 DAYS AGO
right now, in sharing data + sharing privacy: 1) highly-vetted rich, raw data vs 2) open, used simple data #CRADATA

2 DAYS AGO

Interesting discussion re. #predictiveanalytics going on now at #cradata

2 DAYS AGO

MOOCdb shares MOOC user/outcome data across institutions without compromising student privacy #cradata

2 DAYS AGO

extremes: #data protection law in Singapore vs European data protection design #CRADATA (note to self: read these reports)

2 DAYS AGO

@UnaMayMIT shouts out the CSAIL initiative: bigdata.csail.mit.edu #CRADATA

2 DAYS AGO
Thus seems simple enough, of course :) #cradata pic.twitter.com/RzLSckCptl

CRAIG WIGGINS @OXALA75 • 2 DAYS AGO
Sorry for the bad photo quality #cradata pic.twitter.com/L13rFsXNrU

CRAIG WIGGINS @OXALA75 · 2 DAYS AGO

craig wiggins
@oxala75

I've got like 4 tweets backed up in Twitter right now. My phone :-/ #CRADATA

2 DAYS AGO

Ellen Wagner
@edwsonoma

.@oxala75 to be clear, IR doesn't kill big data projects. but insight tools push boundaries of inst. research & reporting capacity #CRADATA

2 DAYS AGO
assessment? 1) gap btwn practitioners needs & tech maturity 2) policy 3) controllers (MIT registrar 'challenge', for example) #CRADATA

next up: @pkhammar. She is a privacy lawyer with whom I had a bkfst chat this morn @ #CRADATA

@gsiemens social network drawn from mobile phone meta data... #CRADATA pic.twitter.com/1emKIUCgxc

VALDIS KREBS  @VALDISKREBS  2 DAYS AGO
craig wiggins
@oxala75

.@pkhammar moved from working w/law enforcement (you kinda know what’s gonna happen w/privacy breaches) to health & ed (wide open) #CRADATA

2 DAYS AGO

RT @ValdisKrebs: @gsiemens social network drawn from mobile phone meta data... #CRADATA pic.twitter.com/woAeujVGfi

2 DAYS AGO

craig wiggins
@oxala75

.@pkhammar: privacy data act of 1974 says u can't give data... yeah, but what does 'give' mean today? #CRADATA

2 DAYS AGO
fun fact: @pkhammar is mathematician-turned-lawyer. how often does that happen? #CRADATA

haha. Data miner activism "What laws are standing in our way and how can we change them" #cradat

@pkhammar: people are working on tech - this is not the problem. Policies won't change until we understand more #CRADATA

Diverse methods are essential to understand/improve edu. Background to qual piece: veletsianos.com/?p=2348 #cradata twitter.com/AndrewDeanHo/s...

"I don't like that commercial entities can have 'the good data' to do research, when academia is blocked by IRBs" - @pkhammar #CRADATA
academic research bodies be like #CRADATA pic.twitter.com/MAxFppV1Wl

@OXALA75 - 2 DAYS AGO

craig wiggins
@oxala75

"ppl make really bad decisions when they're asked to make decisions they don't understand. This is where IRBs are now." - @pkhammar #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

"is 'found data' valid data?" #CRADATA

2 DAYS AGO

Britt Lundgren
@BrittLundgren

Current IRB privacy restrictions mean commercial enterprises can do better research than academic institutions. Time for new policy?#cradata

2 DAYS AGO

craig wiggins
@oxala75

if you are like me: "what is found data?" blogs.sas.com/content/datama... #CRADATA

2 DAYS AGO
next up: Elizabeth Buchanan (aka @stout_ethics) with a bit of a dialogue on provacy + ethics #CRADATA

here's a term for the day" 'algorithmic harms' #CRADATA

let’s put it this way: you remember those @GooglePlus + @facebook "here's your year in pictures set to music that u didn't ask for" #CRADATA

...what if your year was really crappy? divorce, child died, personal injury #CRADATA

How are you gonna feel when you get the extended remix reminder of all that? #CRADATA

If a person did that to you, you’d smack them dead in the face #CRADATA
craig wiggins
@oxala75

But surprise! It's not a person. It's an algorithm. You're welcome :-/ #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

.@stout_ethics: is privacy really the big problem with #bigdata? #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

that's crazy, brah #CRADATA twitter.com/iPlantCollab/s...

2 DAYS AGO

craig wiggins
@oxala75

'algorithmic cruelties' = theatlantic.com/technology/ar... #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

.@stout_ethics: "can all schools afford predictive #analytics? who's left out?" #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

privacy is a right privacy is contextual privacy is hella subjective -@stout_ethics, basically #CRADATA

2 DAYS AGO
"There are very few Moby Dicks. Most of us are sardines. Fisherman doesn’t want THE sardine. It is the shoal that needs protecting" #CRADATA

#cradata pic.twitter.com/FQ9xxyMGIL

CRAIG WIGGINS @OXALA75 - 2 DAYS AGO

yo, this dude is really asking a question about mitigating the damage caused by captured racially or sexually-aggressive acts #crdata

2 DAYS AGO
being me, I gotta say that those means of recording infamous acts are increasingly one of the sole protections i might have #CRADATA

big ups to Anthony Kelly (@NSF) for moderating this panel #CRADATA

now, we're talking about 'the right to be forgotten' (Europe) and 'the right to opt out' (Long Island?) #CRADATA

speaking of the 'right to opt out', @chrs_dede reminds us that we can eat lunch on our own, or eat lunch and continue to talk shop #CRADATA

'birds of a feather' sessions - i like this term. I'mma steal it. #CRADATA

Shuangbao Wang: how much encryption is enough? @alephbass: Simple answer: it depends. #cradata
When ppl design safes, they make the cost of breaking into it more costly than whatever the safe could hold. #chewonthat #CRADATA

haha we are being held back from flooding to lunch, but no one curr. We just wanna talk privacy #CRADATA

.@stout_ethics says re privacy data "we have a right to opt out" - but admits that she'd never say that about, say, vaccines #CRADATA

.@alephbass picks up on the vaccine thread and says "if you dont want data to be collected, maybe u choose another school?" #CRADATA #whoa

1230-1330: Working Lunch

and just as i am about to leave to eat, @vkumar comes up and gets me wise to OSIDs (osid.org) #CRADATA
craig wiggins
@oxala75

@vkumar + I talk #xAPI, OSIDs, and #IMS #Caliper in the same exchange of air. Basically the conversation that cannot be captured #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

ok ok i am really going to go eat now. #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

OH: "most high school transcripts are PDFs" #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

hey, ppl following these #CRADATA tweets: anything you want me to ask of the panelists?

2 DAYS AGO

1330-1445: Integrating Data Repositories

craig wiggins
@oxala75

next panel is on integrating #data repositories, featuring LearnLab DataShop, Databrary + Kauffman Foundation reps #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

ok y'all - back from lunch. next up: integrating #data repositories #CRADATA

2 DAYS AGO
panel is chaired by Gul Kremer first up is Edith Gummer (@KauffmanFDN) #CRADATA

scales & scopes for #data repositories: micro, meso, macro. We're on meso right now in this conversation #CRADATA

Meso-level #data #cradata pic.twitter.com/08b3qa7bEB

CRAIG WIGGINS @OXALA75 - 2 DAYS AGO
Timely tweet from @dataverseorg for #cradata. Who has the authoritative annotated list of these repositories? twitter.com/dataverseorg/s...

#cradata pic.twitter.com/cokQEPn9KP

..buuuut the company that did the Ohio instructional improvement system went out of business *this week*, so.... #CRADATA
Interoperability for data at macro level beginning to be addressed (ceds.ed.gov, nces.ed.gov) #CRADATA
To ppl in the room, this is not big data. To your average school administrator, however...

pic.twitter.com/gVrjuq6j7

CRAIG WIGGINS @OXAL75 · 2 DAYS AGO

craig wiggins
@oxala75

two tools that are being released: one for mapping, and one for drill down to Missouri schools by variable #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

now up: @rogilmore from Penn State to show us the @databrary #CRADATA

2 DAYS AGO
Craig Wiggins (craig.wiggins) on Twitter: 

(ncu.databrary.org = Databrary) #CRADATA

2 DAYS AGO

Craig Wiggins (@oxala75) on Twitter: 
i feel like the people at @databrary and the folks at @narrativeclip should maybe chat 
#CRADATA

2 DAYS AGO

Craig Wiggins (@oxala75) on Twitter: 
access to @databrary is only given by permission; have to sign an agreement to respect 
participants wishes, treat data well. #CRADATA

2 DAYS AGO

Craig Wiggins (@oxala75) on Twitter: 
Institutions have to sign their own agreement #CRADATA

2 DAYS AGO

Craig Wiggins (@oxala75) on Twitter: 
Researchers who share data are not rewarded, so @databrary at least tries to make the process 
easier #CRADATA

2 DAYS AGO

Craig Wiggins (@oxala75) on Twitter: 
not gonna lie: I kind of want to go play with @databrary for the rest of the day #CRADATA

2 DAYS AGO
Findings

- Identifiable data can be shared with permission
- Must reduce barriers to sharing, discovery
- Active curation; searching across/within videos
- Require minimal metadata, but enable expansion/standardization & crowd-sourcing
- Community building/engagement essential

@databrary findings so far #cradata pic.twitter.com/4HeAdx1JTx

CRAIG WIGGINS @OXALA75 - 2 DAYS AGO
it's @koedinger to talk about LearnLab DataShop: learnlab.org/technologies/d... #CRADATA

looking at DataShop, I'm realizing that I have seen this before - @ADL_Initiative? #CRADATA

.@koedinger more learning variation across skills than across students #CRADATA
Learning is complex: variations in task domains, knowledge demands, student characteristics

- Learning curves showing a decrease in error rate (y-axes) for each successive opportunity (x-axes) to learn.
- Averaged across students for different skills or related variables.

- Averaged across skills for different students – LESS variability.

- What causes these variations?
there is a place called Oceans of Data (oceansofdata.org) #TIL #CRADATA

question from woman from Oceans of #Data: fact that instructors have to enter their data into repos slow repo development? #CRADATA
Towards Big Steps Enabled by #BigData Science: cra.org/events/big-dat... #CRData #STEM 
#Education #DataScience #DataLiteracy | @CRAtweets

2 DAYS AGO

Henry Kelly of @ENERGY: "seems like ed data repos are considered in a vacuum" #CRDATA

2 DAYS AGO

Question from @JereConfrey "what about weak student outcome measures?" #CRDATA

2 DAYS AGO

we are kind of talking about successes, but there are "huge measurement challenges...learning can be sort of slow" #CRDATA

2 DAYS AGO

Gul Kremer asks a good question: "Ok, so you have a data repo up. Now what?" That is, how do you keep going, funding-wise? #CRDATA

2 DAYS AGO

so, @rogilmore notes that his repo is part of a consortium of repos that get funding. Some repos offer services for $. What’s best? #CRDATA

2 DAYS AGO
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@edwsonoma If you’re willing, plz share with me your #CRAdata deck "Predictive Models Based on Behavioral Patterns in .edu" Thanx! #BigData

@edwsonoma If you’re willing, plz share with me your #CRAdata deck "Predictive Models Based on Behavioral Patterns in .edu" Thanx! #BigData

@koedinger mentions that @EarthCube has longterm @NSF funding, so it’s got that going for it, which is nice #CRADATA

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makes me think about @ADL_Initiative 3D repository 3dr.adlnet.gov #CRADATA
craig wiggins
@oxala75

makes me think about @ADL_Initiative 3D repository 3dr.adlnet.gov #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

not that 3D repo is hurting for $ or is a data store, but there is the question of sustainability: will ppl put stuff in otherwise? #CRADATA

2 DAYS AGO

craig wiggins
@oxala75

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2 DAYS AGO

craig wiggins
@oxala75

.@chrs_dede says that in the last workshop, was mentioned that a key to repository success are data tools for users #CRADATA

2 DAYS AGO

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@oxala75

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2 DAYS AGO

craig wiggins
@oxala75

.@KauffmanFDN has a publicly-available database and is finding out about issues involved in user access #CRADATA

2 DAYS AGO
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2 DAYS AGO

Edith Gummer: how willing are you to release datasets if you just *know* that correlation/causation will be confused? #CRDATA

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2 DAYS AGO

Companies like Facebook are making incursions into academic research. And that’s a big problem. #CRDATA slate.com/articles/techn... via @Slate

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2 DAYS AGO

Krishna Madhavan gets us up on @nanohub nanohub.org #CRDATA

2 DAYS AGO
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also, Krishna: if your data will get correlation/causation screwed, maybe your model isn't right? #CRADATA

also, Krishna: if your data will get correlation/causation screwed, maybe your model isn't right? #CRADATA

i really am interested in this idea of data markets - not just them existing, but the ideas of impetus, desire, ownership, etc. #CRADATA

Gul Kremer: "anything can be hacked. who should be designing #data repository security?" #CRADATA

@mjsamberg believe it's just getting started. Great examples of data repositories being shared here at #CRADATA will post
looking forward to the next panel about #MOOC - @educause's Diana Oblinger, @edXOnline's Piotr Mitros, and @Harvard's @AndrewDeanHo #CRADATA

i should say that tho these sessions have been great, they are still rather preso-heavy. That said, i didn't do birds-of-a-feather #cradata

Diana Oblinger from @educause: students aren't as familiar with #MOOC as you might think #CRADATA

basically, 1) data collection on #MOOC is emergent, and 2) we're not talking about courses - we're talking contexts #CRADATA

maybe too much focus on #MOOC to 'extend the university's brand' #CRADATA

also, a #MOOC isn't necessarily a standalone environment. (I say it shouldn't be, if best leveraged.) #CRADATA
also, Oblinger counsels us not to sleep on the link between #MOOC and certification….and where learning is supposed to be #CRADATA

2 DAYS AGO

also, Oblinger says something interesting (well, to me): what measurable part does tenacity play in #MOOC acceptance and results? #CRADATA

2 DAYS AGO

Oblinger: "#MOOCs have long-term value" as one node in an "integrative system." #CRADATA

2 DAYS AGO

new term for me to look up: integrative competency management system #CRADATA

2 DAYS AGO

@EmicAcademic not as of yet - but we've yet another day :) #CRADATA

2 DAYS AGO

Piotr Mitros (@edXOnline) now on #bigdata and the assessment of complex skills #CRADATA

2 DAYS AGO
craig wiggins
@oxala75
#CRADATA twitter.com/EmicAcademic/s...
2 DAYS AGO

craig wiggins
@oxala75
#CRADATA twitter.com/EmicAcademic/s...
2 DAYS AGO

craig wiggins
@oxala75
. @AndrewDeanHo - a stistician with a #MOOC hobby #cradata
2 DAYS AGO

craig wiggins
@oxala75
. @AndrewDeanHo - #MOOC is a new learnign context, via opennes, heterogeneity & synchronicity #CRADATA
2 DAYS AGO

craig wiggins
@oxala75
. @andredeanho breaks down the stats for the average #MOOC. I don't think that we really consider these stats when we design #MOOCs #CRADATA
2 DAYS AGO

Rachel Barnum
@OhThatRachel
@oxala75 I'd LOVE to see these @andredeanho
2 DAYS AGO
i mean: gender, race, age, professional background #MOOC are particular #CRADATA

2 DAYS AGO

don't get him started on #MOOC completion rates (actually, do) #CRADATA

2 DAYS AGO

many #MOOC students: "i feel guilty if i drop out" @AndrewDeanHo: why waste that guilt? (answer: residential institution spillover) #CRADATA

2 DAYS AGO

Mitros and @AndrewDeanHo helpfully jousting about accountability + #MOOC #CRADATA

2 DAYS AGO

"any institution that doesn't set its own accountability metrics will have those metrics set for them" - @AndrewDeanHo #CRADATA

2 DAYS AGO

Oblinger returns us to the idea of #MOOC for just-in-time learning #CRADATA

2 DAYS AGO
Oblinger mentions @LinkedIn and @dereed #CRADATA

2 days ago

i can’t help but think of the #LEARNxAPI #MOOC while listening to this exchange here at #cradata #xAPI

2 days ago

The #cradata #mooc panel pic.twitter.com/BcPZpqugH7

CRAIG WIGGINS @OXALA75 · 2 days ago
@AndrewDeanHo says that without making accountability present, are #MOOC any better than, say, @crashcourse? (no offense) #CRADATA

@UnaMayMIT + @vkumar have an exciting little bit about incentivizing #MOOC dedication #CRADATA

Someone should scream out "recommender engine" right now. Wait, is that my job? #MOOC #CRADATA

Mitros just appeased the learning gods and respectfully directed the idea of learning styles to the dustbin #MOOC #CRADATA

@AndrewDeanHo: "even if learning styles don't exist...well, ppl think they do. Think of the marketing!" #MOOC #CRADATA

@AndrewDeanHo shouts out justiceharvard.org #MOOC #CRADATA
Craig Wiggins
@oxala75

...as something that ppl like to have on in the background #MOOC #CRADATA

2 DAYS AGO

Ellen Wagner
@edwsonoma

.@KirkDBorne sure happy to share. #CRADATA

2 DAYS AGO

Oblinger says that we come with what we want to team, not with what they need to learn/do #CRADATA pic.twitter.com/ozpgS0oGEh

CRAIG WIGGINS @OXALA75 - 2 DAYS AGO

Craig Wiggins
@oxala75

.@ehrs_dede: phenomenon of finding other students who share your learner profile. Shouldn’t that happen more w/#MOOCs? #CRADATA

2 DAYS AGO
craig wiggins
@oxala75

.@chris_dede if we don’t know how to design these, maybe we look at what works and reverse engineer it #MOOC #CRADATA

2 DAYS AGO

---

craig wiggins
@oxala75

.@AndrewDeanHo: so, if ‘grit’ is a success vector, I can fake grit. Mitros: isn’t that basically grit? #MOOC #CRADATA

2 DAYS AGO

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craig wiggins
@oxala75

I think Mitros and .@AndrewDeanHo should have a road show #CRADATA

2 DAYS AGO

---

craig wiggins
@oxala75

listening to this conversation, two thoughts: 1) we have a lot to discover about #MOOC 2) #xAPI needs to be exploited more here #CRADATA

2 DAYS AGO

---

craig wiggins
@oxala75

.@UnaMayMIT teases out some of the problems of research when concerning #MOOC #CRADATA

2 DAYS AGO

---

craig wiggins
@oxala75

Oblinger notes that we are able to resurface “things that we already knew” research-wise while investigating #MOOC #CRADATA

2 DAYS AGO
...like how incredibly hard it can be to design a learning experience #CRADATA

and how much of an investment in time and money #CRADATA

2 good points from the dude from @ENERGY: 1) synchronicity is stifling & 2) we need to focus on what can be done, not known #MOOC #CRADATA

RT @leonelsouza3 > Big Steps Enabled by #BigData Science: twitter.com/leonelsouza3/s... #DataScience #CRAdata pic.twitter.com/VcJvqfXP0H
@dyaskin hears not about completion rate problems, but that people don’t return for another course #MOOC #CRADATA

2 DAYS AGO

constructive struggling #CRADATA

2 DAYS AGO

Oblinger notes that #MOOC maybe aren’t made to be understood in the same way (e.g., 101, 102) that on-the-ground courses are #CRADATA

2 DAYS AGO

I mention @vihartvihart moving deliberately to the @khanacademy #CRADATA

2 DAYS AGO

@AndrewDeanHo: "I think #MOOC are floundering. They don’t know what they are or what they are trying to be." #CRADATA

2 DAYS AGO

@UnaMayMIT: we need many more #MOOC experiments #CRADATA

2 DAYS AGO
Krishna Madhavan: "as a #data scientist, I too am disappointed in #MOOC. Their architecture reflects a very linear experience" #CRADATA

@alephbass: "you know who's asking the interesting questions that #MOOC should be asking? Massively open online games." #CRADATA

credentialing is key for #MOOCs (says dude in the back). Dude in the back is right #CRADATA

Andrew Ho: MOOCs are going through an identity crisis. They don’t know who they are and they don’t know who they are trying to meet #CRADATA

side note: i wish everyone at an event had a Twitter handle. Makes things easier #CRADATA

...for me. #CRADATA
...but I didn't actually do that. Mostly just talked to people.

What @AndrewDeanHo drew #MOOC mooch#CRADATA pic.twitter.com/zMQzmtr8ua

#MOOC #cradata twitter.com/EmicAcademic/s...
Excellent first day @ cradata. Thx to whomever invited me :)

@oxala75 @alephbass but we’d confuse all the keyboard players if we start throwing around the term MOOG CRADATA pic.twitter.com/榈RsEPVAZV4

TOM EVANS @TAEVANS - 2 DAYS AGO
From #CRADATA meeting in Arlington, beautiful rainbow to end the day!
pic.twitter.com/KSnqMfhlgP

And that's a wrap on day 1! I'm tired...
...see you in the morning!
Day 2: Advancing Data-Intensive Research in Education

Day #2 of an NSF-funded Computer Research Association workshop in Rosslyn VA

RT @coenenjh RT @leonelsouza3; Big Steps Enabled by #BigData Science: twitter.com/leonelsouza3/s... #DataScience #CRAdata pic.twitter.com/WtiCvpKrp0

@HAROLD_SINNOTT • A DAY AGO

craig wiggins
@oxala75

psyched to hear @matthewberland talk later about creative learning data scientists. Also, dude quoted @zephoria in his paper #legit #CRADATA

A DAY AGO

0830-0845: Summary of yesterday; framing of today
Day 2 of #CRADATA has kicked off! @chrs_dede talking about our progress thus far. Elephants and rabbits. I wish you could be here for it :)

The #CRADATA panel that is coming up: 'Games & simulations for training, informal post-secondary learning' #data pic.twitter.com/1NcPhXtwfj

Check out Matthew Berland's big data and educational gaming at the Play Data Consortium @learnplaydata #CRADATA playdataconsortium.org

Hey, just a reminder that I'll be tweeting frantically about #bigdata & #education today. #cradata #sorrenotsorry
@chris_dede and @NSF’s Susan Singer kick off #cradata pic.twitter.com/qUX2F1mILu

CRAIG WIGGINS @OXALA75 - A DAY AGO
0845-1000: Games and simulations for training, informal post-secondary learning

craig wiggins
@oxala75

Dexter Fletcher heads the Institute for Defense Analyses gets the game + #data panel started. First up: @valshute #CRADATA
Stealth Assessment in Games:
To measure & support learning.

1. Gameplay
2. Capture data in log file
3. Update student model
4. Automated scoring

#cradata pic.twitter.com/k0eDvdD6vB

CRAIG WIGGINS @OXALA75 - A DAY AGO
Stealth Assessment Features

Seamless & Ubiquitous

Formative, not Summative

Accurate & Rich Learner Models

Invisible assessment transparent support!

When the cook tastes the soup, that's formative;
when the guests taste the soup, that's summative.
#cradata pic.twitter.com/eNq5TIW7

CRAIG WIGGINS @OXAL75 - A DAY AGO

craig wiggins
@oxala75

.@valshute talks about her hot-off-the-press data involving Plants vs. Zombies 2 & stealth assessment. Apparently @EA gave up data! #CRADATA

A DAY AGO
that last image had a precedent with a competency framework, but I was too slow #CRADATA #actuallysorry

.@valshute tested Illinois 3rd graders playing @PlantsvsZombies. REsults coming up... #CRADATA
#cradata pic.twitter.com/PovFYd6pk0

@OXALAJ5 - A DAY AGO

Britt Lundgren
@BrittLundgren

Day 2 of #cradata kicks off with a talk on the stealth assessment of 7th grader problem-solving skills using gameplay in Plants vs. Zombies

@A DAY AGO

Alex J Bowers
@Alex_J_Bowers

Measuring student problem solving with Plants vs Zombies 2 @valshute #CRADATA

@A DAY AGO

craig wiggins
@oxala75

@eklopf now talking about a game-based learning #CRADATA

@A DAY AGO
.@eklopf shares the everloving gem that is tylerwigen.com/spurious-corre... #CRADATA

serious correlation, m8 #cradata pic.twitter.com/b5AOD0w6LK

"the game is not where learning happens. the game is part of the larger learning experience...including reflection." - @eklopf #CRADATA

"data useful to students yes, but quite useful to teachers." this is the future #CRADATA
@eklopfen used the game radixendeavor.org #CRADATA

#Games are caught in a validity trap: They want to be target outcomes, but they are accountable to correlations with test scores. #CRADATA

#cradata pic.twitter.com/44zyb6zdMz
P. Shane Gallagher
@psgallagher

managed to attend day 2 #cradata. Construct validation using both Raven’s and MicroDYN interesting for Prob solving skills.

A DAY AGO

craig wiggins
@oxala75

now up: @matthewberland - #data, assessment, #games, creativity #CRADATA

A DAY AGO

Eric Klopfer @MIT shares theory-driven learning power 4 #k12 #games used w/ #teachers pre-during-post @NSTA #CRADATA pic.twitter.com/R9JxVPnzNy

AL @ALSBYERS · A DAY AGO

craig wiggins
@oxala75

ugh, had to step out of the room for a second. now @matthewberland is talking @EveOnline :-/ #CRADATA

A DAY AGO
#dataviz in several games #cradata pic.twitter.com/Jb9rN7B9px

Twitter: CRAIG WIGGINS @Oxala75 - A DAY AGO
Potential game research dashboard #cradata pic.twitter.com/17CazRPxru

@craigwiggins @oxala75 - A DAY AGO

playdataconsortium.org + adageapi.org #CRADATA

@craigwiggins @oxala75 - A DAY AGO

question for @valshute: "is this the end for specific testing?" #CRADATA

@craigwiggins @oxala75 - A DAY AGO

Learning much about the playdataconsortium.org at #cradata this morning from @matthewberland.

@KatrinaStevens @KatrinaStevens1 - A DAY AGO
@oxala75

craig wiggins

question for @ekloper: how do the teachers who get #data use the feedback? #CRADATA

A DAY AGO

@oxala75

craig wiggins

question for @matthewberland: what kind of #data is useful to instructors + how do they use it? #CRADATA

A DAY AGO

@oxala75

craig wiggins

question from @NSF’s Susan Singer for the #games panel: how do you handle/decide investments of time/$_? #CRADATA

A DAY AGO

@oxala75

craig wiggins

answer to Singer from @ekloper: really gotta mesh, be relevant to instructor goals. Just because u can do it... #CRADATA

A DAY AGO

@oxala75

craig wiggins

.@ekloper re #simulations vs #games: structure of games. Games can feel open-ended, but are inherently more structured (& useful) #CRADATA

A DAY AGO

@oxala75

craig wiggins

.@matthewberland to Singer: i’m interested in creating games to create experiences to transfer skills #CRADATA

A DAY AGO
@valshute to Singer: interested in the support of 21st century competencies + creativity + persistence. #Games are where it's at #CRADATA

@eklopfen: simulations vs games: simulations are structured to be more open-ended than games. #cradata

@valshute other types of assessments are flawed in many ways when regarding these competencies; #games work well in these areas #CRADATA

@valshute: it's good that btwn our 3 presos, we showed a lot of types of #games. Many types for many goals + criteria #CRADATA

dude in the back from @Columbia: "#games = assessments that are 'fun', but plz talk abt whether fun assessments yield sparse data" #CRADATA
The unsinkable @valshute #cradata pic.twitter.com/OevzN1S1VX

CRAIG WIGGINS @OXALA75 - A DAY AGO

craig wiggins
@oxala75

. @valshute: game-derived assessment data may yield more 'valid' data #CRADATA

A DAY AGO

craig wiggins
@oxala75

. @ekloper on deriving meaning from #game activities - "why'd u stop in game world to pick up a flower? Got bored or like flowers?" #CRADATA

A DAY AGO

Uniquely Philly
@uniquelyphilly

#CRADATA is trending on Twitter in #philly

A DAY AGO
@matthewberland (in response to @ekloper): actually, tinkering 'aimlessly' is really productive #CRADATA

A DAY AGO

"The only thing watching TV teaches you is how to watch more TV" - Neil Postman. Are games similarly doomed? #CRADATA

A DAY AGO

craig wiggins
@oxala75

.@matthewberland: maybe folks at @zynga focused 2much on optimizing $-making opportunities, not enuff on things we play games for #CRADATA

A DAY AGO

P. Shane Gallagher
@psgallagher

I think I’m moving on from VW data capture for assessment to real world. Assessing through cyberphysical has much more potential. #CRADATA

A DAY AGO

Alex J Bowers
@Alex_J_Bowers

At #CRADATA are games as assessments providing different big data challenges because the assessments can be fun?

A DAY AGO

craig wiggins
@oxala75

dude from @VanderbiltU to panel: "have u thought abt taking this #data and drawing conclusions about metacognition?" #goodquestion #CRADATA

A DAY AGO
craig wiggins
@oxala75

lightbulb: somebody at #CRADATA should be using @periscopeco

A DAY AGO

Ellen Wagner
@edwsonoma

and here we have the rub...business value and pedagogical value are not necessarily on the same trajectory. #CRADATA

A DAY AGO

craig wiggins
@oxala75

man, I want @valshute, @matthewberland + @ekloper to talk to the #xAPI #simulation Community of Practice adlnet.gov/tla/experience... #CRADATA

A DAY AGO

craig wiggins
@oxala75

.@matthewberland talks about conversation with folks in museum cafes: research, m8! #CRADATA

A DAY AGO

Shaun Kellogg
@sblellrg

Does someone have handy Ken Koedinger’s definition/features of Big Data? #crdata

A DAY AGO

craig wiggins
@oxala75

Henry Kelly from @ENERGY: "what #data would move the community towards better ways of assessing competency?" #CRADATA

A DAY AGO
@valshute answers @ENERGY's Henry Kelly by citing raventest.net #CRADATA

A DAY AGO

craig wiggins
@oxala75

Gul Kremer as devil’s advocate: worried abt speed of implementation of games for learning. Not all games are good #CRADATA

A DAY AGO

craig wiggins
@oxala75

Gul Kremer: "what about the harm of games in real life?" #CRADATA

A DAY AGO

Katrina Stevens
@KatrinaStevens1

Games are like any media form - full range of harmful to empowering, and appropriate in different settings. #cradata

A DAY AGO

craig wiggins
@oxala75

.@matthewberland answers appropriately, but honestly best answet to Gul is Socrates vs writing wondermark.com/socrates-vs-wr... #CRADATA

A DAY AGO

Alex J Bowers
@Alex_J_Bowers

We know that using computers for fun and video gaming is positive on student achievement @matthewberland #CRADATA hdl.handle.net/10022/AC:P:213...
@valshute brings up and dispenses with myth that 'violent games make violent ppl'. Also, no1’s advocating 4 #games to take over ed #CRADATA

A DAY AGO

@valshute: "...but kids are being [standardized] tested to death, yo" (she didn’t say 'yo', but i felt it in my soul) #CRADATA

A DAY AGO

@eklopfen: yeah, not all games are appropriate for kids...but the same for all media. Gotta choose, curate #CRADATA

A DAY AGO

Mitros: "are there subsets or ways to expand these studies at scale?" #CRADATA

A DAY AGO

@matthewberland in reponse to Piotr Mitros: "No. Yes. Yes and no." #CRADATA

A DAY AGO

@valshute clarifies: "there are some inroads. A lot of the work that goes into creating the evidence and competency models..." #CRADATA

A DAY AGO
Rather than games, are we better of talking about "interaction design" e.g. Janet Murray mitpress.mit.edu/books/inventin... #CRADATA

A DAY AGO

"...so the models can be transferred in the name of efficiency” #CRADATA

A DAY AGO

we're talking #firstpersonshooters now #CRADATA

A DAY AGO

"are we throwing away the data - especially the visual, video data - when tracking other data?" #CRADATA

A DAY AGO

.@valshute: "actually, we're not tossing that visual info" #CRADATA

A DAY AGO

.@matthewberland: "...of course, that's more important for some games than others." #CRADATA

A DAY AGO
. @JereConfrey asks "what does it mean to look at #data sets across games - e.g., proficiency? What about in Adage API?" #CRADATA

A DAY AGO

Britt Lundgren
@BrittLundgren
Open source analytics for learning via game play available at adageapi.org via @GLScenter at @UWMadison #cradata

A DAY AGO

.craig wiggins
@oxala75
.
.@matthewberland + @valshute answer. Matthew shouts out #xAPI #CRADATA

A DAY AGO

craig wiggins
@oxala75
.
.@valshute talks about certifications/proficiency, and how that transfers from types of games (open to linear) #CRADATA

A DAY AGO
Open source game data collection utilities for #EdGame #DataScience @matthewberland #CRADATA adageapi.org pic.twitter.com/Wmp9fTaJwF

@ALEX_J_BOWERS · A DAY AGO

craig wiggins
@oxala75

.@valshute non-linear games seemed to help students understand physics (angluar, xfrable momentum) better than linear game version #CRDATA

A DAY AGO

craig wiggins
@oxala75

Steve Miller (@IBM) "employers have low opinions of 21st century skills; [American] students have high opinions of those skills" #CRDATA

A DAY AGO

craig wiggins
@oxala75

.@valshute: "games show that students who might not otherwise show skill/knowledge persistence actually possess it" #CRDATA

A DAY AGO
. @valshute: "these visual successes reverse the downward performance/evidence trends"  
#CRADATA

A DAY AGO

. @valshute calls out Eisenberger and learned industriousness  
homepages.se.edu/cvonbergen/fil... #CRADATA

A DAY AGO

Steve Miller: "measuring creativity?" @valshute: "would love to." #CRADATA

A DAY AGO

. @AndrewDeanHo makes three points, but he's talking a bit faster than i managed to type:-/  
#CRADATA

A DAY AGO

omg, @AndrewDeanHo is making 5 points in a row. This was a question-turned-commentary - a ruse! #CRADATA

A DAY AGO
Val Shute @fsu - game research data have shown 2 facilitate increased persistence 4 inner city at-risk youth #CRADATA pic.twitter.com/NvukPOXTF0

Katrina Stevens @KatrinaStevens1
Need researchers to design rapid cycle #edtech evals: Add name to receive more info: fbo.gov/index?s=opportunity... #cradat

Craig Wiggins @oxala75
.@matthewberland: "playing with computers for fun increases interested in math and science. Period." #CRADATANeed researchers to design rapid cycle #edtech evals: Add name to receive more info: fbo.gov/index?s=opportunity... #cradat
craig wiggins
@oxal75

Dexter Fletcher: "but can games get them to learn what we want them to learn?" #CRADATA

A DAY AGO

in response to Dexter Fletcher, @ekloper says "uh, design principles, m8." #CRADATA

A DAY AGO

Office of Ed Tech
@OfficeofEdTech

Need researchers to design rapid cycle #edtech evals: Add name to receive more info: fbo.gov/index?s=opportun... #cradata

A DAY AGO

Alex J Bowers
@Alex_J_Bowers

Standardized tests should measure games rather than the other way around @AndrewDeanHo #CRADATA games matter on their own

A DAY AGO

. @AndrewDeanHo with a (great) last word: "#Games kind of matter on their own!" #CRADATA

A DAY AGO

craig wiggins
@oxal75

ok, the #games panel has ended. Good stuff, everyone! #CRADATA

A DAY AGO
I'm about to go into breakout groups. I may be tweeting a lot more slowly for the next hour or so, since we'll go to lunch after that #CRADATA

Yeah, that tweet slowdown didn't really happen.

In the meantime, here's HarvardX's Andrew Ho with some marching orders.

My #NSF agenda for games research (1/4): Can #games predict outcomes we care about? othertests/college/graduation/employment/salary #CRADATA

My #NSF agenda for games research (2/4): If we randomly assign a games curriculum, will that have a positive impact on outcomes? #CRADATA

#NSF agenda for games research (3/4): Argue that games are important in their own right, tests should try to predict games, not vv. #CRADATA

#NSF agenda for games research (4/4): Show that games are a model for understanding and designing learning environments that matter #CRADATA

1030-1200: Breakout Groups
Teaching a #MOOC is kind of like being on the lower rung of celebrity (via @BakerEDMLab) #cradata

A DAY AGO

i am in the Building human Capacity subgroup now at #CRADATA. 7 of us - possibly the smallest group?

A DAY AGO

sorry, 8 of us in the Building Human Capacity group. @UnaMayMIT just walked in #CRADATA

A DAY AGO

.@oceansofdata, @Columbia, @NIH, @NSF, @MIT, @ADL_Initiative represented here #CRADATA

A DAY AGO

i mean, you all know about this I;m sure, but it just got mentioned, so... nsf.gov/cise/news/bigd... #CRADATA

A DAY AGO

tbh, i feel like i need to read a lot of what @UnaMayMIT has written. Wonder if I can do that before next week? #CRADATA

A DAY AGO
"don't really want learning scientists to have to go from pipes to epiphany" - @UnaMayMIT #CRADATA

there is a data science camp at @MIT for their undergrads! This post was written by the team who does that: r-bloggers.com/how-to-become-... #CRADATA

"ppl tend to compartmentalize #data science. interesting thing is what tools ppl develop to gather what they need." #CRADATA

Ruth Krumhansl: "look at these amazing scientific #data sets...that are not really available to students" #CRADATA

Ruth Krumhansl: "also, students are often times working with #data that they collected. This is an opportunity." #CRADATA

Lori Bland of @GeorgeMasonU has joined us #CRADATA
This 'Building Human Capacity' group is about a few things, but 1 thing is talking abt tools that are needed to get ppl to #data #CRADATA

Industry, academy, practice, govt, philanthropy: the stakeholding groups interested in capacity building via #data research #CRADATA

.@BakerEDMLab: "there's a lot to support ppl working w/#data sets + building capacity 2 use in research+practice, but fragmented" #CRADATA

.@BakerEDMLab: "universities are doing it on their own, w/o support". Lori Bland concurs; local school systems like ideas... #CRADATA

... but can't sustain funding in the face of other traditional needs #CRADATA

training of masters level students (in #data science) is the most developed - especially in the biomedical sphere (e.g., via @NIH) #CRADATA
training in #data science restricted to methods - they have a job to do bcuz they have data in front of them. Really job-driven #CRADATA

A DAY AGO

d of talk about #data literacy right now - for whom, what kind, in what context (higher ed, commercial, secondary) #CRADATA

A DAY AGO
	ere is a push from employers to get #data literacy, but as was said, it is task-oriented. #CRADATA

A DAY AGO

What are some core competencies that we need to develop across the board? #CRADATA

A DAY AGO

I mean, there are the #MOOC on #data science, which are totes helpful, but what about everyone else? #CRADATA

A DAY AGO

Can we teach the kindergartners the concepts of (#data) science without shoveling the calculus on them? #CRADATA

A DAY AGO
yo, bookmark this: Profile of a Big-Data-Enabled Specialist (from @oceansofdata) oceansofdata.org/our-work/profi... #CRADATA

#data should certainly not be regarded as something understood by "someone else" #CRADATA

story of latimes.com/local/educatio... as substitute for Algebra 2 in LA school district #CRADATA (!)

study indicated that equal % of community college students + Scripps folks see facility for #data science to be a better citizen #CRADATA

but hey, @UnaMayMIT warns us that math is a must - otherwise #data science will be wrong #CRADATA

@BakerEDMLab notes that the the idea of #data science is problematic due to domain specificity of practice + skills #CRADATA
By giving students the #data in order to solve problems, maybe we're missing an opportunity to teach skills #CRADATA

A DAY AGO

craig wiggins
@oxala75

also to be stressed: the teamwork aspect of #data science #CRADATA

A DAY AGO

craig wiggins
@oxala75

...tho this makes me think of all the roles involved in #data science - not everyone does everything (e.g., devs, researchers, etc.) #CRADATA

A DAY AGO

craig wiggins
@oxala75

which makes me think of the pie of #instructionaldesign - no one does everything kineo.com/us/resources/t... #CRADATA

A DAY AGO

craig wiggins
@oxala75

one more time: download this and let's talk oceansofdata.org/our-work/profi... (via @oceansofdata) #CRADATA

A DAY AGO

craig wiggins
@oxala75

latimes.com/local/educatio... #CRADATA twitter.com/earino/status/...
craig wiggins
@oxala75

currently talking methods for getting #data science skills to folks. #MOOC, yes, but what else? #CRADATA

A DAY AGO

craig wiggins
@oxala75

i mean, the US federal govt, for example, is not going to pay for every worker to go back to school #CRADATA

A DAY AGO

craig wiggins
@oxala75

we need validated assessments of a broad range of #data science skills. US federal government should support this! #CRADATA

A DAY AGO

craig wiggins
@oxala75

.@UnaMayMIT: hey, we still need teachers to have these #data skills. They have to teach everyone else! #CRADATA

A DAY AGO

craig wiggins
@oxala75

so hey, the federal govt is already on it! @NSF’s Advanced Technological Education (ATE): nsf.gov/funding/pgm_su... #CRADATA

A DAY AGO

craig wiggins
@oxala75

quick talk abt some old #datavisualization techniques that’re still being given country when teaching potential #data scientists #CRADATA

A DAY AGO
@UnaMayMIT says that research tools associated with #data repositories need to be specialized for educational specialists. #CRADATA

A DAY AGO

tools are too general - there needs to be specificity, and a mission. This implies goals and hypotheses, yes? #CRADATA

A DAY AGO

...that said, novice-friendly #data research tool interfaces should be considered broadly, as tools often get repurposed #CRADATA

A DAY AGO

we need greater collaboration between industry + academy: best ideas in academy should find homes in industry & vice-versa #CRADATA

A DAY AGO

that industry+academy collaboration can be incentivized by the federal govt, yes? #CRADATA

A DAY AGO

escience.washington.edu is mentioned #crada
@NSF is also doing that incentivizing of industry+academy collaboration in data science via its regional hubs #CRADATA

Some of these last few point came from @NSF’s Lida Ann Beninson: sciencepolicy.colorado.edu/stcert/student... #CRADATA

also from @NSF (mentioned by @dyna_chem_net): Industry & University Cooperative Research Program (I/UCRC) nsf.gov/eng/iip/iucre/ #CRADATA

BTW, Michelle Dunn from @NIH is leading 'Building Human Capacity' breakout group #CRADATA

#fedgovt really trying to attract the ppl with skills, but they are getting leap-frogged (pay, opportunity) by industry #CRADATA

LIda Beninson notes that $ is a problem. Same problem in #computerscience - less $ to teach teachers abt computer science! #CRADATA
(...than to pull computer scientists who want to teach) #CRADATA

21 HOURS AGO

Lida Beninson notes that diversity is terrible in #computerscience; could we not make the same mistake in #datascience? #CRADATA

21 HOURS AGO

Fun fact: recently, more kids sat for the AP Italian exam than the AP Computer Science exam #CRADATA

21 HOURS AGO

this gem from the sage @EdDieterle #CRADATA twitter.com/oxala75/status...

21 HOURS AGO

@earino i know, right? #CRADATA

21 HOURS AGO

.@BakerEDMLab: yeah, our #data science students are getting snapped up even before they leave school #CRADATA

21 HOURS AGO
@UnaMayMIT + Lida Beninson note that minority #computerscience students are getting snapped up even before graduating #CRADATA

two things: 1) how can u counsel a 1st gen college student to finish school if she's getting a huge offer from industry right now? #CRADATA

2) what happens to #computerscience students who don’t finish school and get higher on in career? does it hurt prospect? #CRADATA

you tell me! :) #CRADATA twitter.com/aa_altieri/sta...

@OfficeofEdTech guide to Expanding Evidence: tech.ed.gov/expanding-evid... #crada

Michelle Dunn: only a 100 minority PhDs in anything related to #data science are created each year #CRADATA
Katrina Stevens
@KatrinaStevens1

@OfficeofEdTech shares 10 opportunities in education in #EdTech Developer's Guide: tech.ed.gov/developers-gui... #cradata

21 HOURS AGO

Craig Wiggins
@oxala75

#CRADATA twitter.com/aa_altieri/sta...

21 HOURS AGO

Craig Wiggins
@oxala75

. @UnaMayMIT, Michelle Dunn + Lida Beninson talk about potential role of fed govt in upping diversity #CRADATA

21 HOURS AGO

Craig Wiggins
@oxala75

Talking about women leaving toxic environment of industry, heading into the dense, 'safe' thicket federal govt #CRADATA

21 HOURS AGO

Katrina Stevens
@KatrinaStevens1

Yes! @eklopf: WHY it works is more important than WHAT works. #cradata

21 HOURS AGO

Craig Wiggins
@oxala75

ruth krumhansl, @UnaMayMIT, @EdDieterle, @eklopf: #data science as a profession needs a publicist #CRADATA

21 HOURS AGO
craig wiggins
@oxala75

Some interesting talk now about how boys + girls approach maker activities. Boys' robots always end up battling each other #CRADATA

21 HOURS AGO

craig wiggins
@oxala75

...and girls focus on building 'pretty' rockets. Once they get over that, though, they routinely outperform the boys #CRADATA

21 HOURS AGO

craig wiggins
@oxala75

man, i have a lot more to type and we all have more to day but it is lunchtime #CRADATA

21 HOURS AGO

craig wiggins
@oxala75

Lida Beninson + @eklofper have digital notes of takeaways from 'Building Human Capacity'; #CRADATA folk, catch them at lunch for more!

21 HOURS AGO

craig wiggins
@oxala75

.@DavidDLacroix: was just an anecdotal story here abt #data science grad students afraid to even talk about industry options... #CRADATA

21 HOURS AGO

craig wiggins
@oxala75

...for fear of being viewed as not taking their field seriously #CRADATA

21 HOURS AGO
Chris Dede in #bigdata @NSF Symp-consumers want to use #bigdata 2 do things better & producers want 2 use BD to do better things. #cradata

Lida Beninson agrees & notes that not a many academic #data scientists don't stay in the academy. Need to know how to talk industry #CRADATA

Thanks to Michelle Dunn for moderating! #CRADATA

OH: conversation about how many women instructors are reticent to teach #MOOC due to harrassment #CRADATA

there are just so many smart people here. I'm kind of choking on it, srsly #CRADATA

just referenced youtube.com/user/schoolof... to talk about the decline of regard for academics #CRADATA
now talking about the concept of #MOOC trolls - like, 'famous' ones #CRADATA

needs to be research, concern + awareness of this danger. This is frankly keeping many instructors from creating #MOOC #CRADATA

#MOOC platforms really need to get on this. Some are more attentive to this than others; should be a purchase factor at unis #CRADATA
Talking about the problem of unis giving up their intellectual property to #MOOC platforms #CRADATA pic.twitter.com/ckNsd0MgBq

@CRAIG WIGGINS @OXALA75  ·  21 HOURS AGO

craig wiggins
@oxala75

so wait - are instructors not getting paid extra for designing/teaching #MOOC, but unis are using it as marketing??? #CRADATA

@ 21 HOURS AGO

craig wiggins
@oxala75

@EmicAcademic yes, but I’m not sure I can repeat everything. ask Ruth Krumhansl, Lida Beninson, @UnaMayMIT #CRADATA

@ 21 HOURS AGO
really interested in @NSF’s focus on diversity; further interested in how the needle is supposed to move #CRADATA

@EmicAcademic also, Michelle Dunn! #CRADATA

1300-1415: The Way Forward: Integrating Insights

back from lunch (btw, thx to @edwsonoma for great post-nosh discussion). Now to integrate insights - @JereConfrey kicks us off #cradata

"learning is not a spectator sport" - gotta include everything that is done and does (including teachers!) #cradata

a warning from @JereConfrey: computer algorithms are not going to solve our problems #CRADATA

not for nothing, but IRBs are getting beat with sticks here at #CRADATA :)

good question for researchers: "how do u resolve differences in results and conclusions in a public space" #CRADATA

#CRADATA twitter.com/EmicAcademic/s...

you guys, @EmicAcademic is like a virtual #CRADATA MVP.

i think @chrs_dede would have a lot of things to say about @ADL_Initiative's Virtual World Sandbox sandbox.adlnet.gov #CRADATA

@oxala75 Hahaha, thanks but I'm clearly just really, really jealous to not be there, and I'm trying to live it through the hashtag. #crada

.@chrs_dede "i suspect that there are learning trajectories for some of the things we're trying to teach - complex causality, etc" #CRADATA
@chris_dede: "what's the learning trajectory for conflict resolution?" #CRADATA

@stout_ethics

#CRADATA: On IRB review of big data: hhs.gov/ohrp/sachrp/co...

The 'integrating insights' panel #cradatapic.twitter.com/GdKaH0Y5Db

@Oxala75 - 20 HOURS AGO

craig wiggins

digital teaching platforms - teacher is still center of classroom, but surrounded by learning systems/tools to complement them #CRADATA

20 HOURS AGO
weakest part of digital teaching systems that @chrs_dede + colleagues came up with was the #data research aspect. This is changing! #CRADATA

@chris_dede: "Plato's cave - #bigdata is the shadows on the cave. We're trying to understand something deeper." #CRADATA

@chrs_dede likes @alephbass's idea of a data vault (I'll need to follow up on that) #CRADATA
Network Enabled Open Education
Changing the Ecology and Economics of Education

- Content
- Experience
- Data
- Learning Opportunities
- Community

@vkumar #cradata pic.twitter.com/Gt6gFKA1r8

CRAIG WIGGINS @OXALA75 - 20 HOURS AGO
Initiative that @vkumar + @eklopfere worse working with in India #cradata pic.twitter.com/pjBUAIqPOH

@CRAIG WIGGINS OXALA75 - 20 HOURS AGO
#data research and use design considerations #cradata pic.twitter.com/Y7N2hXagZc

CRAIG WIGGINS @OXALA75 · 20 HOURS AGO

@vkumar adds that in India, scale is in fact an input in design considerations, not something arbitrary #CRADATA twitter.com/oxala75/status...

20 HOURS AGO

@vkumar: "we need digital learning assessment banks and repositories...and recommender engines (based on good #data analysis)" #CRADATA

20 HOURS AGO
VJ Kumar talking abt networked enabled open education: Data, content, experience, learning opportunities, community #CRADATA

@vkumar: "we need more work on mapping btwn educational courses and job skills"
#CRADATA

@oxala75 @chris_dede ari.gesher.net/nsf-big-data-i... See the section entitled “Managed Cloud Environments for Data Analysis” (last section) #CRADATA

@alephbass thx, m8! #CRADATA
Vijay Kumar @MIT shares #bigdata @NSF Summit 2 improve recommender systems 4 Networked Enabled Open Ed #CRADATA @NSTA pic.twitter.com/7XMy2RlPYi

@ALSBYERS · 19 HOURS AGO

Andrew Ho
@AndrewDeanHo

@vkumar proposes digital assessment item banks, then proposes maps from #MOOCs to jobs. Why not from assessments to jobs and vv? #CRADATA

19 HOURS AGO

craig wiggins
@oxala75

@vkumar: "create automatic scaffolding strategies for a wide variety of 'network learners' to better support autonomous learning?" #CRADATA

19 HOURS AGO
and yeah, @vkumar is all about making lower thresholds for providing and using #data, echoing the 'Building Huamn Capacity' session #CRADATA

@giemens: y'all need @SoLAResearch + the International Educational Data Mining Society #CRADATA

@giemens notes that, historically, when we get way too much data, we start abstracting - think encyclopedias, etc. Not new #CRADATA

we focused on #data science are "helicopter parents", says @giemens. We should be a bit less expectant #CRADATA

actually, he says that "we need to unclench a little bit" #CRADATA :)

that said, are we kind of late to the part in the educational context? Think freaking #LMS #CRADATA
man, @gsiems bringing us to church on #LMS + the problems of #data in ed context #CRADATA pic.twitter.com/PuBrXMpVaW

@CRAIGWIGGINS @OXALA75 - 19 HOURS AGO

"we need to move from a 4-yr relationship w/our students to a 40-yr one, to help them be who they think they should be" - @gsiems #CRADATA

@19 HOURS AGO

.@gsiems: "we need to develop tools, methods + ppl in the #learninganalytics space"
#CRADATA

@19 HOURS AGO

.@gsiems: are we sliding back into "beautiful Skinnerian days" w/all this data talk? #datascience isnt necessarily behaviorism #CRADATA

@19 HOURS AGO
We have reason to fear that the multitude of books which grows every day in a prodigious fashion will make the following centuries fall into a state as barbarous as that of the centuries that followed the fall of the Roman Empire. Unless we try to prevent this danger by separating those books which we must throw out or leave in oblivion from those which one should save and within the latter between what is useful and what is not.2

Since 1550 there have been issues of big data & info overload @gsiemens #CRADATA Blair (2003) dash.harvard.edu/handle/1/32283... pic.twitter.com/xS6uFwpMoc

@alex_3_bowers 19 HOURS AGO

craig wiggins
@oxala75

@gsiemens: “we need an @TheASF or a @WordPress for #learninganalytics” #opensource #CRADATA

19 HOURS AGO

craig wiggins
@oxala75

ok, here’s our chance for us to comment on everything over the last 2 days (..!). @UnaMayMIT steps up to the plate #CRADATA

19 HOURS AGO

craig wiggins
@oxala75

@UnaMayMIT calls out the good example of the PAR project and @Starfish360, but not accessible everywhere #CRADATA

19 HOURS AGO

George Siemens
@gsiemens

@oxala75 @SoLAREsearch preach it brother #crada

19 HOURS AGO
C. Laubenthal
@Phbob

Google Ngram Viewer: '[big data]', 1800-2008 in English. books.google.com/ngrams/graph?c...
#cradata

19 HOURS AGO

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craig wiggins
@oxala75

here's an interesting thing that I'd like to talk about more (that @UnaMayMIT just brought up):
#data has diff sensors #CRADATA

19 HOURS AGO

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craig wiggins
@oxala75

I think @UnaMayMIT is on point number 4 - *almost* at @AndrewDeanHo-level chain punching #CRADATA

19 HOURS AGO

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craig wiggins
@oxala75

.@chs_dede picks up the sensors thread and mentions #IoT. I bring jup #xAPI + #IoT and yesterday's #GCTCExpo15 project #CRADATA

19 HOURS AGO

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George Siemens
@gsiemens

"We live in an era of priority paralysis" #cradata

19 HOURS AGO

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craig wiggins
@oxala75

.@stout_ethics counters @UnaMayMIT's pro #data segmentation stance #CRADATA

19 HOURS AGO
parents want kids to be engineers, but dunno what engineers do. Solution for engineer societies: educate public #Data science? #CRADATA

@oxala75 19 HOURS AGO

@psgallagher brings up idea of expanding into the cyberphysical environment #CRADATA

@oxala75 19 HOURS AGO

@oxala75 thanks for keeping the tweets coming #cradata

@oxala75 19 HOURS AGO

@g Siemens: afraid we'll spend next 5 yrs talking tools + stuff, rather than research. This is why we need open, common platform #CRADATA

@oxala75 19 HOURS AGO

@RobRobertson my pleasure! #CRADATA

@oxala75 19 HOURS AGO

@g Siemens + @psgallagher talk about idea of common #learninganalytics #data platform #CRADATA

@oxala75 19 HOURS AGO
Piotr Mitros with a good point: maybe writing a paper after research shouldn't be the end result #CRADATA

19 HOURS AGO

Henry Kelly (from @ENERGY): "is there a better way to extract data about what ppl are actually doing?" I wanted to scream. #CRADATA

19 HOURS AGO

...but @valshute brought up an interesting automated task analysis tool (called DNA) that she worked on, but that didn't take off #CRADATA

19 HOURS AGO

Piotr Mitros: we should be sharing code via @github, rather than sending around papers #CRADATA

19 HOURS AGO

i...i think someone just called #SCORM a mastodon #CRADATA

19 HOURS AGO

@gsiemens: the open #data tools gets us out of the sinkhole of having to muck about w/standards #CRADATA

19 HOURS AGO
@dyaskin counters @gsiemens with: yeah, but Apache - it took years and many other efforts failing for it to be The One #CRADATA

#CRADATA twitter.com/Alex_J_Bowers/...

1415-1430: Funding Opportunities

so, the final panel: the funding opportunities panel #CRADATA pic.twitter.com/51wsYqD9AU

CRraig Wiggins @oxala75 - 19 HOURS AGO

#CRDATA data model neutral open learning analytics framework for sharing analyses twitter.com/dapostrophe/st...

19 HOURS AGO
First up in the funding oppty: Education Research & Development Center Program: Virtual Learning (ies.ed.gov/funding/ncer_r...) #CRADATA

19 HOURS AGO

want to know more about that opportunity? ask @IESResearch's Dr Erin Higgins #CRADATA

19 HOURS AGO

Up now: Michelle Dunn from @NIH to talk about a funding opportunity: datascience.nih.gov/bd2k #CRADATA

19 HOURS AGO

#CRDATA twitter.com/xpconcept/stat...

19 HOURS AGO

anyway, this @NIH #datascience finding opportunity sounds hot. Wait, it’s two opportunities, really. Ok. Get on this, ppl #CRDATA

19 HOURS AGO

Taylor Martin (@NSF) up to talk about funding opps. Deadline has passed, bit good to get up in it #CRDATA

19 HOURS AGO
craig wiggins
@oxala75
what was that citizen #data science program that Taylor Martin just talked about? #CRADATA

Andrew Ho
@AndrewDeanHo
Funding #CRADATA: IES: ies.ed.gov/funding/pdf/20... NIH: datascience.nih.gov/bd2k NSF: nsf.gov/funding/pgm_su... nsf.gov/pubs/2015/nsf... (and all over)

19 HOURS AGO

craig wiggins
@oxala75
i didn't even know about this: circlcenter.org/stemc #CRADATA

19 HOURS AGO

craig wiggins
@oxala75
also! Building Community and Capacity for #Data-Intensive Research...
nsf.gov/funding/pgm_su... #CRADATA

19 HOURS AGO

craig wiggins
@oxala75
word on the street is that the next big event is educationaldatamining.org/EDM2015, but it is in Madrid #CRADATA

19 HOURS AGO

1430-1500: Plenary Discussion: Closing Thoughts and Next Steps

craig wiggins
@oxala75
Susan Singer brings us back to the genomic metaphor #CRADATA

18 HOURS AGO
craig wiggins  
@oxala75
Singer: what things do you want us at funding agencies to think hard abt in terms of ways we can help u push fwd emerging visions? #CRADATA

18 HOURS AGO

.craig wiggins  
@oxala75
.@edwsonoma hints that maybe it would be good to figure out a way to continue conversation, keep in touch #CRADATA

18 HOURS AGO

.craig wiggins  
@oxala75
which is a good question. what happens after this? i mean, i know collabs will happen and project will get funded, but what else? #CRADATA

18 HOURS AGO

.craig wiggins  
@oxala75
i mean, i know what i want: @gsiemens’ idea of common tools for #learninganalytics, but #dastjustmedoe #CRADATA

18 HOURS AGO

.craig wiggins  
@oxala75
Steve Miller (@IBM) mentions a follow on (#data science?) project - let him know if you want in! #CRADATA

18 HOURS AGO

.craig wiggins  
@oxala75
Someone on far side of room brings up mentions #bigdata hubs. @NSF? #CRADATA

18 HOURS AGO
Diana Oblinger (@educause) mentions whes.org as a place to look into #CRADATA

18 HOURS AGO

Susan Singer: @CRAtweets will be sending us a survey to rate this conference. Looking forward to it #CRADATA

18 HOURS AGO

#CRDATA is now over! Thanks to @chrs_dede (and whoever invited me to the conf!)

18 HOURS AGO