

## Agenda

### Meeting of the 21<sup>st</sup> Century Skills Collaboration

July 18, 2017 5:30-8 pm  
 Audubon Room, 3<sup>rd</sup> Floor (near elevators)  
 Grand America Hotel  
 550 South Main Street  
 Salt Lake City, UT 84111

5:30-5:45 pm	Introductions
5:45-6:05 pm	Overview of the Proposed Collaboration on 21 <sup>st</sup> Century Skills <ul style="list-style-type: none"> <li>➤ Merrilea J. Mayo, Center for Curriculum Redesign (15 min)</li> <li>➤ Discussion (10 min)</li> </ul>
6:05-6:30 pm Critical Thinking Measures	Miniproposal #1: What is “Critical Thinking” in the Classroom vs. on the Job? <ul style="list-style-type: none"> <li>➤ Merrilea J. Mayo, Center for Curriculum Redesign (10 min)</li> <li>➤ Discussion (15 min)                         <ul style="list-style-type: none"> <li>○ Baxley: Are critical thinking and problem solving the same?</li> <li>○ Baxley: How many students will we need?</li> <li>○ Bostwick, Smith: Can demographic variations be accounted for?</li> <li>○ Fitzgerald: How do we improve the reliability/validity of supervisor ratings?</li> <li>○ Fitzgerald: Subjective rating reliability changes with timespan of acquaintance. How are we accounting for this?</li> <li>○ Fitzgerald: Is this a within-subjects design? (Will each student take all tests)</li> <li>○ Bielefeldt, Wingate: Data analysis needs its own person, not an evaluator</li> <li>○ Bielefeldt: What organizational structures will be needed to ensure academic-industry coordination?</li> <li>○ Davis, Hyder: 21stC test seems great, but what would its results mean for instructional gap closure?</li> <li>○ Bostwick, Yang, Hyder: Are we studying interns, employees, or both?</li> <li>○ Reid: Costs do not include incentives for student participation or incentives for Centers to coordinate activities of universities or industry partners</li> </ul> </li> </ul>
6:30-7:05 pm Critical Thinking Measures	Miniproposal #2: Unlocking the Power of Computerized Maintenance Data to Inform Technician Training <ul style="list-style-type: none"> <li>➤ Pat Pritchard, Green River College and Sasha Matison, JobWorthy (20 min)</li> <li>➤ Discussion (15 min)                         <ul style="list-style-type: none"> <li>○ Mayo: What data, specifically, are we going to be able to get from CMMS records? What algorithms will be used to transform it, and what are we likely to get out as results?</li> <li>○ Reid: Can we get subjective supervisor ratings on the same individuals for which we have CMMS data?</li> <li>○ Reid, Bostwick: Would coaching be an appropriate intervention to pair with this?</li> <li>○ Bielefeldt, Wingate: Not clear the data mining activity is really suited to be linked to a particular educational intervention.</li> <li>○ Mayo, Bielefeldt: Need to deal with the fact that this can’t be a stand-alone project if it’s “new” research, at least not in the context of the NSF grant. Can we fold it into one of the other critical thinking proposals (#1 or #4) as an additional measurement or validation approach?</li> <li>○ Davis, Hodge: DACUM approaches are heavily used, so in that sense, this can be viewed as an augment to an existing, proven methodology.</li> </ul> </li> </ul>

<p>7:05 pm -7:25 pm Critical Thinking Interventions</p>	<p>Miniproposal #4: Diagnostic Reasoning Training Intervention</p> <ul style="list-style-type: none"> <li>➤ Pat Pritchard, Green River College (10 min)</li> <li>➤ Discussion (10 min) <ul style="list-style-type: none"> <li>○ Mayo: Do we have enough PIs who could use this methodology, to make this a collaborative project rather than a single PI project?</li> <li>○ Reid: If access to CMMS data is a required part of this project, that may prevent other PIs from joining.</li> <li>○ Johnson: Needs to be separate from the CMMS project.</li> <li>○ Baxley: Our maintenance tech students at Eastern Iowa Community College could potentially use this intervention, might even have access to industry partner CMMS data</li> <li>○ Wingate: What information exactly are we getting from CMMS data and how would it be applied to this project?</li> <li>○ Mayo, Bielefeldt: Need a clear connection between workplace and classroom.</li> <li>○ Bielefeldt: How do we port to multiple locations and provide the teacher training needed to create fidelity at each site?</li> <li>○ Wingate: Is there a reason the budget is heavy on project management?</li> <li>○ Hyder: Need to explain some terms/concepts more, like concept mapping, and include literature references.</li> </ul> </li> </ul>
<p>7:25-7:45 pm Resilience Interventions</p>	<p>Miniproposal #3: Resilience through a Belonging Intervention</p> <ul style="list-style-type: none"> <li>➤ Merrilea Mayo, Center for Curriculum Redesign (10 min)</li> <li>➤ Discussion (10 min) <ul style="list-style-type: none"> <li>○ Bielefeldt: What is the mechanism by which the project will coordinate with industry partners?</li> <li>○ Bielefeldt: How will we know if the industry and academic forms of the interventions and surveys are comparable?</li> <li>○ Bielefeldt: Is there time for a pilot before the full study?</li> <li>○ Bielefeldt: Leavers may need to be surveyed as to their reasons for leaving.</li> <li>○ Bielefeldt: Data Analyst and Researcher need to be separate roles.</li> <li>○ Reid: Sounds too good to be true, but theory of action is clear and can be validated. Specifically, we could look at the mindset shift leading to students seeking out other resources.</li> <li>○ Reid, Mayo: There are other foundations that could fund this: Arnold, Posse.</li> <li>○ Wingate: Need financial incentives for student and worker participants.</li> <li>○ Bostwick: Our program could test this.</li> <li>○ Hodge: Belonging interventions work – frequency of contact is another way to improve belonging. Personal experience is retention rate increasing from 50 to 70%.</li> <li>○ Hyder: Attrition during a belonging study seems inevitable but could backfire politically.</li> <li>○ Johnson: We may not have the numbers of traditional minority youth that the prior studies have used as the target audience. Community colleges serve a lot of returning adults.</li> </ul> </li> </ul>
<p>7:45-8:00 pm Resilience Measures</p>	<p>Adjunct to Miniproposal #3: The Measurement of Resilience</p> <ul style="list-style-type: none"> <li>➤ David Klieger, ETS (15 min)</li> </ul>

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