

# Teaching and Learning

| 20th Century Paradigm  | 21st Century Paradigm  |
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| <p><b>Characteristics of Traditional Instruction</b></p>   | <p><b>Characteristics of Effective Instruction (Iowa Core Curriculum)</b></p>  |
| <p><b>Teacher-Centered Classrooms</b></p> <ul style="list-style-type: none"> <li>• Factory-model education with one size fits all instructional approaches</li> <li>• Sitting, listening and note-taking</li> <li>• Teacher centered - top down, sage on the stage, teacher controlled lessons</li> <li>• students working alone</li> <li>• order through discipline</li> </ul>  | <p><b>Student-Centered Classrooms</b> enabled by technology:</p> <ul style="list-style-type: none"> <li>• students construct knowledge/experiences</li> <li>• connected to student experiences/interests</li> <li>• students communicate their understanding/reasoning/connections</li> <li>• create their own collaborative learning communities</li> <li>• performance-based in real world context</li> </ul>  |
| <p><b>Teaching for Recall</b></p> <ul style="list-style-type: none"> <li>• Drill and kill</li> <li>• making learning a short-term low engagement activity</li> <li>• Lower levels of Blooms taxonomy</li> <li>• Little connection to prior knowledge</li> <li>• Emphasis on memorization and recall of facts</li> <li>• compartmentalized</li> <li>• little or no teaching for transfer</li> <li>• infrequent, factual assessment</li> </ul> | <p><b>Teaching for Understanding</b> assisted by technology:</p> <ul style="list-style-type: none"> <li>• leads kids to explain, find evidence, generalize, connect and apply</li> <li>• connections to prior knowledge</li> <li>• attain deep procedural and conceptual knowledge</li> <li>• long term/thinking centered</li> <li>• powerful representation</li> <li>• inducts students into the discipline</li> <li>• developmentally appropriate</li> <li>• teach for transfer</li> </ul>   |
| <p><b>Summative Assessment Focus</b></p> <ul style="list-style-type: none"> <li>• no formative assessment,</li> <li>• tests are factual knowledge,</li> <li>• only one way to assess,</li> <li>• assessment data is not used to adjust teaching or instruction</li> </ul>  | <p><b>Assessment for Learning</b> through technology:</p> <ul style="list-style-type: none"> <li>• inform/adjust instruction</li> <li>• planned/ongoing</li> <li>• clear conceptual targets/criteria for success</li> <li>• used by teachers and students -for differentiation and self monitoring</li> <li>• regular descriptive feedback</li> </ul>  |
| <p><b>Text Book Based Curriculum</b></p> <ul style="list-style-type: none"> <li>• boring and irrelevant to student lives</li> <li>• low bar, not authentic</li> <li>• low expectations for students based on their challenges</li> <li>• non-project based learning</li> <li>• little chance for application of skills</li> <li>• no transition to real world</li> <li>• repetitive or routine</li> </ul>                                    | <p><b>Rigorous and Relevant Curriculum</b> integrated with technology</p> <ul style="list-style-type: none"> <li>• complex, provocative opportunities for authentic work</li> <li>• personally or emotionally challenging; builds connections between content and students' lives</li> <li>• challenging content</li> <li>• authentic work and the application of knowledge and skills to solve complex problems</li> <li>• original application of skills to complex problems</li> <li>• requires analysis and synthesis for authentic product</li> </ul> |
| <p><b>Factory Model</b></p> <ul style="list-style-type: none"> <li>• creating tracks</li> <li>• minimizing variability</li> <li>• predominately whole group</li> <li>• teaching to the middle</li> <li>• all kids doing the same thing at the same time</li> <li>• teaching to the middle</li> <li>• culture of anonymity</li> </ul>   | <p><b>Teaching for Learner Differences</b> powered by technology:</p> <ul style="list-style-type: none"> <li>• access to the general ed curriculum for all students</li> <li>• teacher uses assessment data to make sound instructional decisions to meet the needs of individual students</li> <li>• teacher uses a variety of methods to teach the desired concepts and skills</li> </ul>  |