Power Practices Implementation Guide

Power Practices are evidence-based strategies[1] designed to support teachers in engaging students through thoughtful design, delivery, and assessment of instruction. These practices empower students to actively engage with content[2], leverage their unique assets, and recognize the strengths within their educational ecosystem. Power Practices support all learners by building upon their prior knowledge and fostering meaningful learning outcomes through active engagement. They are versatile and interconnected, fitting into multiple domain areas of the BranchED Power Framework, which underscores a holistic and integrated approach to teaching and learning.

Key Components of Power Practices:

- **Active Engagement**: Power Practices encourage students to take an active role in their learning process. Through interactive and participatory methods, students engage deeply with the content, leading to better understanding and retention.[3]
- **Asset Leveraging**: These strategies recognize and utilize the assets that students bring to the classroom, including their backgrounds, personal experiences, and individual strengths. This asset-based approach helps students see the value of their contributions and builds a more inclusive learning environment.[4]
- **Educational Ecosystem**: Power Practices emphasize the importance of the broader educational ecosystem, acknowledging that learning is influenced by various external factors and environments. This perspective helps students make connections between their classroom experiences and the world at large.
- **Building on Prior Knowledge**: By tapping into students' existing knowledge and experiences, Power Practices make new content more accessible and relatable. This approach helps bridge gaps in understanding and promotes continuity in learning.[5]

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[1] The IRIS Center. (2014). *Evidence-based practices (part 1): Identifying and selecting a practice or program*. Retrieved from https://iris.peabody.vanderbilt.edu/module/ebp_01/

[2] Dong, A., Jong, M.S.Y., & King, R.B. (2020) How does prior knowledge influence learning engagement? The mediating roles of cognitive load and help-seeking. *Front. Psychol.* 11:591203. doi: 10.3389/fpsyg.2020.591203

[3] Li, J., & Xue, E. (2023). Dynamic Interaction between student learning behaviour and learning environment: Meta-analysis of student engagement and its influencing factors. *Behavioral sciences*, *13*(1), 59. https://doi.org/10.3390/bs13010059

[4] Lopez, F. (2017). Altering the trajectory of the self-fulfilling prophecy: Asset-based pedagogy and classroom dynamics. *Journal of Teacher Education, 68*. DOI: 10.1177/0022487116685751

[5] Dong, Jong, & King. (2020).

- **Meaningful Learning Outcomes:** The emphasis on engagement and relevance ensures that students not only learn but also understand the significance of what they are learning, apply it effectively, generalize their understanding to various contexts, and adapt their knowledge and skills to novel settings. This leads to more meaningful and lasting educational outcomes.[6]

The four Power Practices highlighted in the 2024 Summer Institute will be:

- Holistic Knowledge Activation
- Eco-Scaffolded Learning
- Adaptive Inquiry
- Proactive Monitoring

Holistic Knowledge Activation

Description: Holistic Knowledge Activation is an engagement strategy that centers on recognizing and leveraging the prior knowledge each student bring to the classroom.[7] This approach involves identifying what students already know and building the necessary background knowledge to help them access and engage with new content.[8] Unlike traditional methods that focus solely on academic knowledge, Holistic Knowledge Activation values the full spectrum of students' experiences, including:

- *Academic and Personal Background Knowledge:* Insights gained from formal education and personal interests or hobbies.
- *Lived Experiences:* The broad array of life events and personal experiences that shape students' perspectives.
- *Social Competencies:* Practical skills and knowledge used in navigating daily social interactions and environments.

Key components:

- **Identifying Existing Knowledge[9]**
    - Teachers begin by assessing students' prior knowledge through discussions, surveys, or diagnostic assessments, ensuring an understanding of what students already know, which serves as a foundation for new learning.
    - By assessing the full spectrum of students' prior knowledge and experiences, teachers gain insights into the funds of knowledge students hold and can make connections to new learning.

[6] Wang, M. T., & Degol, J. (2014). Staying engaged: Knowledge and research needs in student engagement. *Child Development Perspectives*, *8*(3), 137–143. https://doi.org/10.1111/cdep.12073

[7] Hattan, C., Alexander, P., & Lupo, S. (2023). Leveraging what students know to make sense of texts: What the research says about prior knowledge activation. *Review of Educational Research, 94*. DOI:10.3102/00346543221148478

8 Moll, L. C., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. Theory Into Practice, XXXI(2), Spring.

[9] Esteban-Guitart, M., & Moll, L. C. (2014). Funds of identity: A new concept based on the funds of knowledge approach. *Culture & psychology*, *20*(1), 31-48.

- **Building Background Knowledge[10]**
  - Once existing knowledge is identified, teachers introduce new concepts in a way that connects with students' prior experiences and understanding using relatable examples, analogies, and real-life applications to make new content accessible and relevant.
  - By using varied resources and materials to connect new concepts with students' prior experiences and understanding, teachers can build a richer and more engaging background knowledge base and make new content more vivid and memorable.
- **Integrating Academic and Personal Insights[11]**
  - Teachers find opportunities to integrate both academic knowledge and personal experiences, encouraging students to draw from their entire range of knowledge.
  - By integrating both academic knowledge and personal experiences in classroom activities and discussions, students can share and reflect on their personal and academic backgrounds, enriching the learning experience for everyone.
- **Utilizing Life Experiences and Social Contexts[12]**
  - Teachers incorporate students' accumulated life experiences and social skills into the learning process, making content more relatable and practical. This might include problem-solving tasks that reflect real-world scenarios or collaborative projects that draw on students' social knowledge.
  - By incorporating the full spectrum of students' knowledge and experiences into the learning process, teachers can bridge the gap between theoretical knowledge and practical application, making learning more impactful and meaningful.

Implementation Steps:

1. **Preparation**:
   - Gather information about students' backgrounds, interests, and experiences through activities such as student interviews, caregiver interviews/surveys, and questionnaires.
   - Use formative assessments to gauge students' existing knowledge and understanding of new concepts.
2. **Lesson Connections:**
   - Identify opportunities in lessons to connect new content with students' prior knowledge and experiences, ensuring that instructional materials are relevant and engaging.
   - Integrate opportunities for students to share their personal experiences and relate them to academic content.
3. **Instructional Strategies**:
   - Incorporate real-world applications and problem-solving tasks that draw on students' everyday social contexts and life experiences.

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[10] Fisher, D., Frey, N., & Lapp, D. (2012). Building and activating students' background knowledge: It's what they already know that counts: Teachers must assess and build on the background knowledge students possess. *Middle School Journal, 43,* 22-31. 10.2307/23074856

[11] Rivet, A. E., & Krajcik, J. S. (2008). Contextualizing instruction: Leveraging students' prior knowledge and experiences to foster understanding of middle school science. Journal of Research in Science Teaching: The Official Journal of the National Association for Research in Science Teaching, 45(1), 79-100.

[12] Hefyan, M., Undestad, M., & Maier, M. (2023). Incorporating Children's Lived Experiences in the Classroom: Findings from Teacher Interviews on Diversity, Equity, and Inclusion in Early Care and Education Curricula and Professional Development. MDRC.

- Use instructional strategies that promote active engagement, critical thinking, and collaboration, helping students make connections between their experiences and new learning.
4. **Reflect and Plan**:
   - Provide opportunities for students to reflect on their learning process and how their prior knowledge and experiences have influenced their understanding of new content.
   - Continuously reflect on the effectiveness of lesson plans and instructional strategies, adjusting as needed to enhance student engagement and understanding.

Eco-Scaffolded Learning

Description: Eco-Scaffolded Learning is an engagement strategy that supports teachers as they design and deliver instruction. This strategy focuses on scaffolding student learning to gradually transition them from teacher-led instruction to independent learning.[13] This approach aims to build student confidence, enhance problem-solving skills, and deepen content understanding, preparing them to apply their knowledge in novel situations. What makes Eco-Scaffolded Learning unique is its integration of the educational ecosystem into the Gradual Release of Responsibility model, recognizing that learning extends beyond the classroom and is influenced by various external factors and environments. By implementing Eco-Scaffolded Learning, teachers create a dynamic and interconnected learning environment that empowers students to become confident, autonomous learners. This strategy not only supports academic achievement but also prepares students to navigate and apply their learning in diverse and ever-changing real-world contexts.[14]

Key components:

- **Modeling[15]**
  - In this initial stage, teachers demonstrate the task or concept, providing clear examples and explanations.
  - By explicitly modeling thinking processes, problem-solving strategies, and key skills, teachers ensure that students understand the foundational elements of the content.
- **Guided Practice[16]**
  - Students practice the task or concept with teacher support and guidance. This collaborative stage allows for shared responsibility in the learning process.
  - By facilitating small group work, providing feedback, and posing probing questions to deepen understanding and encourage critical thinking, teachers are fostering a supportive environment where students feel confident to explore ideas, ask questions, and engage in meaningful dialogue with their peers.

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[13] Han, F. (2021). The relations between teaching strategies, students' engagement in learning, and teachers' self-concept. *Sustainability, 13*(9).
[14] Ibid.
[15] Salisu, A., & Ransom, E. (2014). The role of modeling towards impacting quality education. *International Letters of Social and Humanistic Sciences, 32*. 54-61.
[16] Rosenshine, B. (2012). Principles of instruction: Research-based strategies that all teachers should know.

- **Independent Practice[17]**
  - Students take on tasks independently, applying what they have learned with minimal teacher intervention.
  - By enabling students to demonstrate their mastery and apply their knowledge in various contexts, teachers promote autonomy and self-reliance in learning.
- **Differentiation[18]**
  - Teachers consider student strengths and experiences, content complexity, and individual learning preferences when making instructional decisions about the transition of learning responsibility in order to teach to the student's zone of proximal development.[19]
  - By embracing differentiation in eco-scaffolded learning, teachers ensure that each student receives instruction tailored to their unique learning profile, fostering a sense of belonging and maximizing learning outcomes for all.
- **Integration of the Educational Ecosystem**
  - Throughout each stage of Eco-Scaffolded Learning, teachers actively facilitate connections between classroom learning and the broader educational ecosystem. This involves recognizing and incorporating influences from various external factors and environments that impact student learning, such as:
    - **Community Resources[20]**: Leveraging local community resources, such as museums, libraries, and local experts, to enrich the learning experience.
    - **Family Involvement[21]**: Encouraging family[22] engagement and drawing on students' home environments and backgrounds to support learning.
    - **Real-World Applications[23]**: Integrating real-world scenarios and practical applications to make learning relevant and meaningful.
    - **Technology and Media[24]**: Utilizing digital tools, online resources, and multimedia to expand learning opportunities within and beyond the classroom.

Implementation Steps:

1. **Planning and Preparation**:
   - Identify key learning objectives and plan how to gradually release responsibility from teacher to student.
   - Select appropriate resources and real-world connections that align with the content and students' backgrounds.
2. **Modeling**:
   - Clearly demonstrate the task or concept, thinking aloud to show the cognitive processes involved.

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[17] Ibid.

[18] McQuarrie, L. M., & McRae, P. (2010). A provincial perspective on differentiated instruction: The Alberta Initiative for School Improvement (AISI). Journal of applied research on learning, 3(4), 1-18.

[19] Kostogriz, A., & Veresov, N. (2021). The zone of proximal development and diversity. In Oxford Research Encyclopedia of Education.

[20] Redding, S., Murphy, M., & Sheley, P. (2011). Handbook on family and community engagement.

[21] Ibid.

[22] This references an extended definition of family to include extended family, kinship networks, non-traditional family forms, chosen families, multi-generation families, and other nurturing environments where students feel valued and supported.

[23] Mebert, L., Barnes, R., Dalley, J., Gawarecki, L., Ghazi-Nezami, F., Shafer, G., Slater, J., & Yezbick, E. (2020). Fostering student engagement through a real-world, collaborative project across disciplines and institutions. *Higher Education Pedagogies*, 5(1), 30–51.

[24] Bond, M., & Bedenlier, S. (2019). Facilitating student engagement through educational technology: towards a conceptual framework. Journal of Interactive Media in Education, 2019(1).

- Leverage multimedia and real-world examples to introduce concepts, contextualize learning, and demonstrate skills.

3. **Guided Practice**:
   a. Engage students in collaborative activities, providing support and feedback as they practice new skills.
   b. Facilitate discussions that connect classroom learning to external influences and environments.

4. **Independent Practice**:
   a. Assign tasks that require students to apply their learning independently, encouraging them to draw on resources from the broader educational ecosystem.
   b. Monitor progress and provide targeted support as needed, fostering a sense of autonomy and confidence.

5. **Reflect and Plan**:
   a. Reflect on the effectiveness of the eco-scaffolded approach and gather student feedback to inform future instruction.
   b. Adjust instructional strategies to better integrate the educational ecosystem and support student independence.

Adaptive Inquiry

Description: Adaptive Inquiry is an engagement strategy to enhance guided exploration of a topic within a classroom. This teaching strategy is designed to foster continuous learning and engagement among all students through intentional questioning and discussion techniques. At its core, this strategy focuses on understanding where students are in their learning journey, asking intentional questions tailored to individual student understanding, and creating an inclusive environment where every student feels empowered in their learning process.[25] Through probing questions and targeted support, teachers guide students towards deeper thinking and understanding, enhancing their ability to apply learning in multiple contexts.

Key components:

- **Understanding Student Progress[26]**
  - Teachers begin by assessing where students are in their understanding of the content. This primarily occurs through informal observations, discussion, initial questioning, and formative assessment.
  - By understanding each student's starting point, teachers can tailor their approach to meet individual needs and ensure that all students can actively engage in the learning process.

- **Intentional Questioning[27]**
  - Teachers ask intentional questions to individual students based on their current level of understanding. These questions are designed to scaffold learning, challenge students at appropriate levels, and encourage active participation.

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[25] Mebert, Barnes, Dalley, Gawarecki, Ghazi-Nezami, Shafer, Slater, & Yezbick. (2020).

[26] Hamilton, L., Halverson, R., Jackson, S., Mandinach, E., Supovitz, J., & Wayman, J. (2009). Using student achievement data to support instructional decision making (NCEE 2009-4067). Washington, D.C.: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

[27] Salmon, A. K., & Barrera, M. X. (2021). Intentional questioning to promote thinking and learning. *Thinking Skills and Creativity*, *40*, 100822.

- By providing intentional questions to individual students, teachers create a supportive environment where every student feels valued and included in the discussion.
- **Probing for Deeper Understanding** [28,29]
  - Throughout the discussion, teachers use probing questions to elicit deeper thinking and understanding from students. These questions encourage students to reflect critically, make connections, and explore complex ideas.
  - By probing for deeper understanding, teachers help students move beyond surface-level comprehension to develop more nuanced and sophisticated insights.
- **Identifying Areas for Additional Support**[30]
  - As the discussion unfolds, teachers identify areas where greater understanding is needed among students by providing additional support to students in these areas. This may involve addressing common misconceptions, areas of confusion, or topics requiring further exploration.
  - By actively listening to students' questions, comments, and responses, teachers gain valuable insights into areas of strength, difficulty, or misunderstanding and can pinpoint specific concepts or skills that students are struggling to grasp.

Implementation Steps:

1. **Preparation**:
   - Familiarize yourself with the content and learning objectives for the lesson.
   - Plan a series of strategic questions that target different levels of understanding and encourage deeper thinking.
2. **Assessment:**
   - Assess student understanding through informal observations, discussion, initial questioning, formative assessment, and your understanding of students' prior knowledge and experiences.
   - Use this information to tailor your questioning and discussion techniques to meet individual student needs.
3. **Questioning and Discussion:**
   - Engage students in a discussion using strategic, scaffolded questions that encourage critical thinking and reflection.
   - Be attentive to individual student responses and adjust your questioning approach accordingly.
4. **Probing for Deeper Understanding:**
   - Use probing questions to challenge students to think more deeply about the content and make connections to their own experiences.
   - Encourage students to support their ideas with evidence and engage in respectful debate and dialogue.
5. **Identifying Areas for Support**
   - Monitor student responses and identify areas where additional support may be needed.

[28] Tofade, T., Elsner, J., & Haines, S. T. (2013). Best practice strategies for effective use of questions as a teaching tool. American journal of pharmaceutical education, 77(7), 155.

[29] Walsh, J. A., & Sattes, B. D. (2011). *Thinking through quality questioning: Deepening student engagement*. Corwin Press.

[30] Ibid.

- Provide targeted assistance to individual students or small groups, whether through re-teaching, guided practice, or additional resources.
6. **Reflect and Plan:**
   - Reflect on the effectiveness of the Adaptive Inquiry approach and identify areas for improvement.
   - Use student feedback and assessment data to adjust your questioning and discussion techniques for future lessons.

Proactive Monitoring

Description: Proactive Monitoring is an engagement strategy to support teachers in providing actionable student feedback that encourages students throughout the learning process. Designed to continuously assess and enhance individual student progress and understanding, Proactive Monitoring is a dynamic approach that involves teachers actively observing students as they work, providing immediate feedback, and adjusting instructional plans in real-time based on student needs.[31] By developing and implementing a system for Proactive Monitoring that is appropriate for their classroom community, teachers can provide a differentiated learning experience tailored to each student, considering factors such as strengths and experiences, content complexity, and individual learning preferences.

Key components:

- **Active Observation[32]**
  - Teachers circulate the classroom, closely observing students as they work on their assignments. This allows teachers to gather real-time data on student performance and engagement.
  - Observation focuses on identifying signs of understanding, confusion, and engagement. Teachers note both verbal and non-verbal cues, such as body language, facial expressions, and the nature of student interactions with peers and materials.
  - By actively observing students, teachers gain valuable insights into their individual learning processes and can adapt their instruction accordingly, ensuring every student receives the support they need to succeed.

- **Immediate Feedback[33]**
  - Based on their observations, teachers provide immediate, specific, actionable feedback to students. This feedback is constructive and focused, aimed at addressing misconceptions, reinforcing correct approaches, and guiding students toward deeper understanding.
  - Feedback is delivered in a supportive manner, encouraging a growth mindset. For example, a teacher might say, "I see you're on the right track with this equation. Let's review the next step together," or "I noticed you skipped a crucial detail in your analysis. What evidence can you add to support your argument?"

[31] Selvaraj, A. M., & Azman, H. (2020). Reframing the Effectiveness of Feedback in Improving Teaching and Learning Achievement. *International Journal of Evaluation and Research in Education*, *9*(4), 1055-1062.

[32] Anderson, J., & Taner, G. (2023). Building the expert teacher prototype: A metasummary of teacher expertise studies in primary and secondary education. Educational Research Review, 38, 100485.

[33] Attali, Y., & Powers, D. (2010). Immediate feedback and opportunity to revise answers to open-ended questions. Educational and Psychological Measurement, 70(1), 22-35.

- By offering timely and targeted feedback, teachers empower students to reflect on their learning and make meaningful progress toward their academic goals.
- **Data Collection**[34]
  - Teachers systematically collect data on student performance during the observation and feedback process. This can include anecdotal notes, checklists, rubrics, and digital tools that track student progress, including proficiency and needs for additional support.
  - Data collection is organized and ongoing, allowing teachers to monitor trends and patterns in student learning over time. This data is used to inform instructional decisions and provide targeted support where needed.
  - By gathering comprehensive data, teachers gain a holistic understanding of student progress and can tailor their instruction to meet the diverse needs of their learners.
- **Dynamic Response**[35]
  - Teachers use the information gathered to adjust their instructional plans in real time and in future instruction. This might involve re-teaching a concept to the whole class, providing additional resources to a small group, or offering one-on-one support to individual students.
  - Instructional adjustments are flexible and responsive, ensuring that all students receive the level of challenge and support they need. For instance, a teacher might introduce more complex problems to students who have mastered the basics while providing scaffolding for those who need extra help.
  - By dynamically responding to student needs, teachers create an inclusive learning environment where every student feels valued and supported in their academic journey.

Implementation Steps:

1. **Preparation**:
   - Identify built-in observation points in each lesson where teachers can circulate and assess student work.
   - Create a protocol for observing and recording student behaviors and performance

     indicators that are appropriate for the classroom.
2. **Observation**:
   - As students work on their assignments, move around the classroom purposefully, engaging with students individually and in small groups.
   - Use the developed protocol to track observations and note areas where students excel or struggle (e.g., checklist, digital tool, monitoring log).
3. **Providing Feedback**:
   - Offer immediate feedback that is specific, actionable, and focused on helping students understand the next steps in their learning process.
   - Encourage students to reflect on the feedback and act upon it, asking questions for clarity as needed.

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[34] Valley, C. S. D., & Montgomery, N. Y. (2018). Tier 1: How to Use Classroom Data to Set Goals and Monitor Student Progress: Jim Wright, Presenter.
[35] Poehner, M. E. (2008). Dynamic assessment: A Vygotskian approach to understanding and promoting L2 development (Vol. 9). Springer Science & Business Media.

4. **Adjusting Instruction**:
   - Based on observations and feedback interactions, make necessary adjustments to the lesson plan. This could mean modifying the current activity, reteaching a concept, or providing differentiated tasks to various student groups.
   - Continuously monitor the effectiveness of these adjustments and make further changes as needed.
5. **Reflect and Plan**:
   - After the lesson, reflect on the effectiveness of the Proactive Monitoring strategy. Consider what worked well and what could be improved.
   - Use insights gained from the monitoring process to inform future lesson planning and instructional strategies, ensuring a continuous improvement loop.

Additional Notes: