**Reflection on your Conference Logs**

<table>
<thead>
<tr>
<th>What patterns are you noticing?</th>
<th>What signs of progress do you see?</th>
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<tbody>
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<table>
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<tr>
<th>How are you and your new teacher supporting each other on the next steps you’ve committed to?</th>
<th>Are you meeting consistently?</th>
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Knowing Students

October 2019
Who are you as a learner?

Think back on your own personal learning experiences - either as a child or an adult.

What made the learning meaningful? Did you ever view yourself as “average”?

What led to that conclusion?
Is Rosa average?

Rosa received these grades in her AP Calculus class:

- First classroom test: D.
- “Discovery learning” activity asking students to conjecture why 2 swimmers crossed a river at different rates in a strong current: A-minus.
- College Board’s AP Calculus exam: 2. (The top score is 5.)

Decide for yourself!

A college recommendation form asks her teacher to indicate whether Rosa is above average, average, or below average as a math student. Which box should she check? Make notes, and then explain your decision to an elbow partner.

Notes:
In all disciplines that seek to understand individuals two points are accepted as fact. First, the object of interest is the individual, not the statistical average (Bergman & Vargha, 2013; Levsky & Singer, 2003; Murray, 1938). No matter how elegant the theory, how sophisticated the methods, or how precise the estimates, progress is measured by insights about individuals. Second, human individuals are remarkably variable: Regardless of age and across all cultures, a person changes dramatically over time, and even moment-to-moment as a function of context (Fischer & Bidell, 2006; van Geert & van Dijk, 2002; Mischel, 1973). Importantly, this kind of individual variability is not limited to behavior: It is pervasive at every level of analysis, from minds (Siegler, 2007), to brains (Mazziotta et al., 2009), to genomes (Chen et al., 2012), and to cells (Dawson, 1986). In each case, individual variability is the rule, not the exception.

[. . . ] In recent years a number of scholars have emphasized the centrality of the individual, and have sought to explain both variability and stability in individuals (e.g., Fischer & Bidell, 2006; van Geert & van Dijk, 2002; Molenaar, 2013; Thelen & Smith, 2007). As a result of their work (and others), a science centered on individual variability has emerged as an important perspective in many fields, including cell biology, cancer, neuroscience, and psychology (e.g., Blau & Liakopoulou, 2013; Garrett & Samanez-Larkin, 2013; Nesselroade, Gerstorf, Hardy, & Ram, 2007; Stahlberg, Kubista, & Aman, 2011). Indeed, the influence of this work is so widespread that we cannot do justice to it in one article. Here we emphasize that, despite differences in theory and method, a common assumption underpins this work: In contrast to traditional models, explaining individual variability is essential to understanding individuals. While still in its infancy, this research is already producing groundbreaking insights.

[. . . ] Since the mid-twentieth century several relevant disciplines have (quietly) undergone a dramatic shift, moving from traditional static perspectives—based on statistical averages and assuming linear change—to a dynamic perspective that analyzes individual variability in growth processes and moment-to-moment activity.

The heart of this new approach is dynamic systems theory—a flexible set of concepts and nonlinear mathematical models uniquely suited to analysis of complex phenomena in fields as diverse as physics, meteorology, biology, and psychology (to name a few). [. . . ] A dynamic systems perspective requires that all behavior be analyzed in the context where it occurs. Behavior is not something that a person “has”—instead, it emerges from interactions between the individual and his or her contexts. Performance in sports illustrates this principle. Even the relatively simple act of throwing a baseball is not a fixed action. Indeed no two pitches are ever the same. Context matters! In the moment, a pitcher throws differently depending on multiple factors working together: temperature, crowd noise, lighting, fatigue, a runner on base, and even the catcher’s skill (to name a few). Understanding a pitcher’s performance, including its variability, depends on analyzing how these factors function in the immediate
context, including the characteristics of the person throwing the ball, of course. These kinds of dynamic processes shape all activities, not just throwing a baseball (Rose & Fischer, 2009).

Because the dynamic systems approach assumes that behavior is actively organized and context-dependent, variability is expected as a natural outcome. In contrast to most traditional models, which assume individuals have relatively stable behavior, the dynamic systems approach starts by assuming individuals vary, and seeks to identify stable patterns within that variability (van Geert, 2000). This assumption represents a fundamental difference from other approaches, and it has important conceptual and methodological consequences for the future of the science of the individual. If variability is systematically ignored, individuals become synonymous with statistical averages, and researchers lose the ability to account for the very processes that underpin the phenomena they seek to explain.

Individual variability is the essence of adaptive behavior, whether we are talking about a person or a cell.

**Multiple Pathways**

Historically, in disciplines that study individuals, development has been viewed as a linear progression through a universal sequence, where the start and endpoint are determined (Gottlieb, Wahlstein, & Lickliter, 1998). The dynamic systems perspective offers a stark contrast, in which variability in the sequence is natural, and multiple pathways to the same outcome are expected. Of course, the notion of variability in developmental processes is not new (Dewey, 1963; Fischer & Bidell, 2006; Vygotsky, 1978). What is new is that research grounded in dynamic systems has shown how a focus on variability in pathways leads to the discovery of new kinds of order in developmental processes. This insight has implications for research and practice, especially where normative approaches have not been effective.

Research on single-word reading illustrates this principle nicely.

Without a doubt, the act of reading is a complex process with multiple components that come together to influence success (LaBerge & Samuels, 1974). In one study, Knight and Fischer (1992) applied concepts and tools from dynamic systems to analyze pathways for reading single English words in 1st-, 2nd-, and 3rd-grade students. Classic models assume that skillful single-word reading depends on the early integration of sound analysis with visual-graphic skills (Torgesen, Wagner, & Rashotte, 1994; Wolf, 2007). This prototypical model, shown in Figure 1, begins with word definition (a child must know the word before he/she can use it). To start, sound analysis (assessed by rhyming words) and visual-graphic skills (assessed by letter identification or spelling) are independent. An early step in reading is learning to integrate sight and sound on the way to proficiency with single words.

For many children in the study the results supported the average-based model. Not only did it explain the pathway of a majority of children but also was consistently associated with good reading skills. However, many students did not follow this pathway. Were these students simply delayed compared with their peers? Using dynamic methods capable of detecting patterns in individual variability, Knight and Fischer discovered that many of the children were in fact not delayed—they were progressing along two alternative pathways (Figures 2 and 3), both notable for their lack of integration. For pathway B (Figure 2), letter definition led development, but reading and rhyming remained independent. Interestingly, while this pathway characterized many struggling readers, some students following this path had strong reading skills. In contrast, pathway C (Figure 3) was marked by a three-strand
progression where reading, letter identification, and rhyming were independent of one another. This path characterized most children with profound reading problems. Remarkably, in this study all 120 students showed one of the three pathways—there were no ambiguous cases!

[. . . ] A final example showing the importance of understanding patterns of variability across context comes from a landmark study of children’s social behavior (Shoda, Mischel, & Wright, 1994). In this study, researchers collected intensive observational data (for example, 169 hours of video per individual) for 84 children over the course of a 6-week residential summer camp program. Traditional models based on averages assume personality is a stable “trait” that is best understood by focusing on rank-order scores across dimensions (such as extraversion). In contrast, critics argue that “personality” is not stable, and that the dominant influence on a person’s behavior is the context. Arguments of this kind had gone in circles in a decades-long debate, and progress had been decidedly limited.

Fortunately, the debate has been resolved by Shoda and colleagues who, by using a dynamic approach that highlights individual variability, were able to reconcile the arguments and move the field forward. Two findings from their study are relevant to this article. First, as critics argued, children’s behavior was variable across context. Moreover, different contextualized patterns led to the same rank-order score. For example, of two children with the same aggregate aggression score, one child was aggressive with peers, but not with the teachers; whereas the other was aggressive with teachers, not peers. Second, and most important, while children’s behavior varied across context, there was stability in the way it varied (e.g., the child who was aggressive with teachers, but not peers was likely to maintain the same pattern over time). Taken together, the findings reveal something important about personality: It is stable as static models suggested, but not in the way they assumed. Likewise, behavior is variable as critics suggested, but it is not random, as they assumed. Instead, individual behavior varies systematically across contexts. In other words, there is stability in the individual variability.

The detection of ordered variability across contexts has obvious implications for both research and practice. For children’s social behavior, it reconciles a long-standing (and largely unproductive) debate about personality involving traits versus situations. Individuals respond differently to distinct contexts!

**Conclusion**

Human behavior is remarkably variable. It changes systematically over time, and it fluctuates moment-to-moment depending on the immediate context. If this kind of individual variability is ignored or marginalized, it acts as noise disguising the dynamic nature of individual behavior and growth, and it will often mislead researchers. In contrast, starting with a focus on individual variability, rather than statistical averages, leads to new, elegant explanations for the richness of behavior, including models and methods for analyzing variability over time and across contexts. These concepts and tools help more closely align theory, research, and practice, and give us the best opportunity to develop usable knowledge about the complex and variable ways that individuals behave, learn, and grow.
# Deep Knowledge of Students

<table>
<thead>
<tr>
<th><strong>Instead of . . .</strong></th>
<th><strong>The teacher might . . .</strong></th>
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<tbody>
<tr>
<td>Delivering instruction about content, concepts, and procedures to the class without prior investigation of their individual experiences, ideas, and beliefs</td>
<td>Explore various prior concrete experiences and existing ideas and beliefs that different students have. (Opener: “What’s the first thing you thought of when we began this topic?”)</td>
</tr>
<tr>
<td>Playing the part of the know-it-all expert</td>
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<tr>
<td>Asking students to “pay attention”</td>
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<tr>
<td>Setting only content mastery targets</td>
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<tr>
<td>Requiring all students to follow the same sequence in mastering knowledge and skills</td>
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<tr>
<td>Asking students simply to take notes</td>
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<tr>
<td>Assigning the same homework for all students</td>
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<tr>
<td>Having all students demonstrate understanding of a topic in the same format</td>
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<tr>
<td>[more blank sections for participant ideas]</td>
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These are our students

From Harold Hodgkinson, Director, Center for Demographic Policy, The Institute for Educational Leadership,

- About 4.0 million public school students were expected to enroll in 9th grade in fall 2017
- 1 in 5 (~10 million) youth have learning and attention issues
- 3.2 million students in public schools are in gifted and talented programs
- In 2017-2018 school year, 14% of all school age youth receive services with an Individualized Education Plan (IEP)
- 20% of students who learn differently are typically undiagnosed learning disabled
- About one-third of our black and Hispanic children are being raised in poverty while 10% of non-Hispanic whites live in poverty.
- 9.2% of students are language learners and almost 9 million young people ages 5 to 17 speak a language other than English in their home. 2.6 million of them have difficulty speaking English
Excerpt 1. How the Brain Learns

Arguably the most important insight for education from the field of neuroscience is that the brain is highly adaptive, a property called plasticity (Singer 1995; Squire & Kandel 2009). Students’ brains continuously adapt to the environments where they live and work, including school, home, workplaces, community centers, and so forth. As students learn in these places—mastering reading, playing online chess, or practicing typing—these experiences gradually sculpt the architecture of the brain. The brain is made up of networks of interconnecting nerve cells called neurons and supportive glial cells. Learning experiences are translated into electrical and chemical signals that gradually modify connections among neurons in certain areas of the brain [. . .] following a “use it or lose it” rule. These experience-dependent changes in the efficacy of neuronal connections are thought to be the biological substrate of memory. Over time, they aggregate to significant reorganization in certain brain structures, which reflects learning in domains associated with those structures.

[. . .] Abilities are not fixed but rather continuously developing. In essence, the more a student learns in a particular area, the more intelligent the brain becomes in that area. This plasticity enables students to overcome many learning challenges. [. . .] The educational environment plays a crucial role in shaping the brain’s abilities and determining students’ academic achievement. Education should therefore strive to provide learning experiences that enable students at all levels to build toward mastery of a common set of skills. Research on brain plasticity also indicates that the brain is learning virtually all of the time, in both formal and informal contexts (Squire & Kandel 2009; OECD 2007). [. . .] Neuroscience research suggests that active engagement is necessary for learning. The changes in neuronal connections that underlie learning in the brain do not seem to occur when learning experiences are not active. This suggests that passively sitting in a classroom hearing a teacher lecture will not necessarily lead to learning. Conversely, active engagement with educational material within or outside of school will support learning.

Excerpt 2. Emotion and the Learning Brain

Over 2,000 years ago, Plato declared, “All learning has an emotional base.” Modern neuroscientists also argue that emotion is fundamental to learning (Damasio 1994, 1998; Dagleish 2004; Grindal, Hinton, & Shonkoff 2011; Immordino-Yang et al. 2007, 2009; LeDoux 2002; Rolla, Hinton, & Shonkoff 2011). In the words of Mary Helen Immordino-Yang and Antonio R. Damasio (2007), “We feel, therefore we learn.” Emotion recruits a complex network of brain regions, many of which are involved in learning. These areas include the prefrontal cortex, hippocampus, amygdala, hypothalamus, and many others (Dangleish 2004; Davidson 2003; Lang & Davis 2006; LeDoux 2002; MacLean 1949; Morgane et al. 2005). When a student has a learning experience, emotion and cognition operate seamlessly in the brain.
The brain uses emotion to effectively guide learning, tagging experiences as either positive and worth approaching or as aversive and worth avoiding. When students encounter a situation, the brain quickly and automatically appraises it (Frijda 2006). The prefrontal cortex is the site of this appraisal, marking whether the situation brings positive or negative feelings (Davidson & Fox 1989). When events are positive, the left prefrontal cortex shows more activity, with higher-frequency brain waves. By contrast, when events are negative, activation in the prefrontal cortex occurs dominantly in the right. The prefrontal cortex is also the seat of executive functioning, which involves goal setting, appropriately selecting learning strategies, monitoring progress, and assessing outcomes (Fuster 2008). Therefore, emotion and executive function are physically integrated in the brain. The prefrontal cortex is still maturing in adolescence so executive functioning skills are still developing (Luna & Sweeney 2004). Education should therefore support the development of these skills by giving students opportunities to practice setting goals, tracking progress toward them, adjusting strategies along the way, and assessing outcomes.

Since cognition and emotion are interrelated in the brain, individuals can cognitively regulate their emotions (Luan Phan et al. 2005; Ochsner et al. 2002; Ochsner et al. 2004; Phillips et al. 2003). The employment of these regulatory strategies recruits areas of the prefrontal cortex. Since the prefrontal cortex is still maturing in childhood and adolescence, students in primary and secondary school are still developing their emotional regulation skills (Gabrieli 2004; Luna & Sweeney 2004). In fact, one study showed that students who are between 8 and 12 years old were virtually unable to reduce negative affect, and students who are between 13 and 17 years old demonstrated only half the regulatory control of adults (Gabrieli 2004). Education can support the development of emotional regulation skills, and this should be a priority as emotional regulation skills strongly predict academic achievement (Hinton, Miyamoto, & della Chiesa 2008; OECD 2007).

**Excerpt 3. Motivation and the Learning Brain**

Motivation in the brain is driven by emotion: Individuals are motivated to engage in situations with an emotionally positive valence and avoid those with an emotionally negative valence (Cain & LeDoux 2008; Lang 2010; Lang & Davis 2006; OECD 2007). Motivation recruits brain areas involved in emotion, including the prefrontal cortex and amygdala (Robbins & Everitt 1996). Much more research is needed to explore the brain mechanisms underlying the complex and varied motivations of students in educational contexts. However, there is extensive education psychology research on student motivation.

Pioneering work by Carol Dweck (2006) is beginning to connect neuroscience with this established body of education psychology research on motivation. Extensive research has shown that many students hold one of two distinct attitudes toward intelligence (Dweck 2006). In one attitude, called entity, students treat intelligence as if it is fixed: A student is either smart or not. In the other attitude, called incremental, students believe that intelligence is achieved: A student can become more intelligent by working hard to learn. Students with an incremental theory of intelligence are more likely to persist in the face of challenge and use mistakes as opportunities to develop understanding.
Dweck (2006) connects these attitudes with brain research. One brain region (frontal) responds strongly to negative feedback about performance, and another region (temporal) activates with efforts to correct mistakes in performance. Students with an entity attitude show a stronger frontal response to the negative feedback they receive when they make a mistake than students with an incremental attitude. Brain processes closely follow students’ attitudes about learning. Students with an entity attitude react strongly to errors but do not take advantage of the opportunity to learn more effectively, while students with an incremental attitude react less strongly to errors and work more effectively to learn from their mistakes.

**Excerpt 4. Stress and the Learning Brain**

Low levels of stress can be positive or tolerable and may even contribute to motivation. However, high levels of frequent or prolonged stress can be toxic to the brain (Grindal, Hinton, & Shonkoff 2011; McEwen & Sapolsky 1995; Shonkoff & Phillips 2000). Positive stress involves short-lived stress responses, including brief increases in heart rate or mild changes in stress hormones such as cortisol. Examples of positive stress include giving a class presentation, feeling challenged by a mathematics problem, or trying out for a sports team. This kind of stress is a normal part of life, and learning to adjust to it is an essential feature of healthy development. Tolerable stress refers to stress responses that could affect brain architecture but occur for brief periods or in the presence of support so that the brain can recover. Tolerable stress can range from taking a high-stakes exam to experiencing the death of a loved one with the support of a parent, teacher, or school psychologist. Toxic stress refers to strong, frequent, or prolonged activation of the body stress management system in the absence of support. Toxic stressors include chronic poverty, abuse, bullying, and trauma without support.

Toxic stress impacts the physical architecture of the brain. It leads to quantifiable changes in areas of the brain that are centrally involved in learning, such as the hippocampus, which can result in learning problems (McEwen & Sapolsky 1995; Shonkoff & Phillips 2000). Furthermore, toxic stress can change the stress system so that it responds at lower thresholds (Shonkoff & Phillips 2000). This means that a situation that would not seem threatening to most students may trigger a stress response in students who have experienced toxic stress. This stress response can interrupt learning. Moreover, it can manifest in a problematic aggressive attitude that damages students’ relationships with teachers and peers.

Fortunately, recent research shows that supportive school environments can buffer students’ brains from the impacts of unhealthy levels of stress (Rappolt-Schlichtmann Ayoub, & Gravel 2009; Rappolt-Schlichtmann et al. 2009; Rappolt-Schlichtmann & Watamura 2010). Rappolt-Schlichtmann and colleagues (2009) studied the level of the stress hormone cortisol in students of low and middle socioeconomic status. Results reveal that low-SES students typically come to school with higher levels of cortisol than their middle-SES counterparts. However, when students from disadvantaged backgrounds are in high-quality schools, their cortisol levels decrease throughout the day. The better the school, the more the cortisol levels decrease. Therefore, a quality learning environment can help students reach healthy cortisol levels, which lead to better emotional regulation and more favorable learning outcomes (Mangels 2011; Shonkoff & Phillips 2000; OECD 2007).
Excerpt 5. Relationships and the Learning Brain

Learning and emotions take place in an environment of relationships, and the human brain is primed for emotional bonding, which supports learning (Hinton 2011; Hinton & Fischer 2011; Immordino-Yang & Damasio 2007; National Scientific Council on the Developing Child 2004). The brain is tuned to experience empathy, which intimately connects individuals to one another’s experiences. Mirror neurons fire to simulate others’ experiences (Dobbs 2006). When a student sees a coach swing a baseball bat, some of the same neurons in the student’s brain fire as when the student swings the bat himself or herself. Similarly, when a teacher sees a student cry, some of the same neurons in the teacher’s brain fire as when the teacher cries himself or herself.

This mirror neuron system is thought to be the neurological basis for empathy and supports bonding and learning. The mirror neuron system biologically primes students to attune to others and bond with them, which sustains interactions with adults and peers that support learning. Adults and more-expert peers provide scaffolding that enables children and adolescents to grapple with advanced knowledge, which leads to richer and more rapid learning than would be possible through individual exploration (Vygotsky 1978). For example, as a student struggles to understand why a wooden block floats in water despite its large size, a parent can guide the student toward understanding by strategically suggesting other objects to test. The bond between the student and the parent facilitates this interaction, with the student attuning to the parent and trusting his or her suggestions. These types of social interactions are fundamental to learning. Environments that promote positive relationships and a sense of community therefore promote learning.
Simply put...Inclusion is:

The most important principles of inclusive education are:

No two learners are alike

All students are welcomed into their classroom

All educators share in the responsibility for ALL students’ learning

Adapted from Friend and Pope, 2005
**Knowing Students Across Multiple Dimensions**

Name: ________________________ Mentor: ________________________

Grade Level/Subject Area: ________________________ Date: ________________________

**Analysis focus:** Sub-group  Whole Class  Case Study Student

*Suggested use: Talk with your mentor about what you know (or don’t know yet) about your students across multiple dimensions.*

<table>
<thead>
<tr>
<th><strong>Personal Context</strong></th>
<th><strong>What I know:</strong></th>
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<tbody>
<tr>
<td>• Socio-cultural traditions</td>
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<tr>
<td>• Non-school literacies</td>
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<tr>
<td>• Home and community background</td>
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<td>• Primary language</td>
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<tr>
<td>• Educational histories</td>
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<td>• Perceptions</td>
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<tr>
<td>• Life experiences</td>
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**What I’m wondering:**

**Next steps:**

<table>
<thead>
<tr>
<th><strong>Individual Preferences</strong></th>
<th><strong>What I know:</strong></th>
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</thead>
<tbody>
<tr>
<td>• Learning style preferences</td>
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<tr>
<td>• Multiple intelligences</td>
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<td>• Interests and hobbies</td>
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<td>• Aptitudes</td>
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<tr>
<td>• Learning environment (seating, lighting, sound, time of day)</td>
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<tr>
<td>• Emotional competencies</td>
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**What I’m wondering:**

**Next steps:**

<table>
<thead>
<tr>
<th><strong>Meta-cognitive Skills</strong></th>
<th><strong>What I know:</strong></th>
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</thead>
<tbody>
<tr>
<td>• Study and learning skills</td>
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<tr>
<td>• Ability to:</td>
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<tr>
<td>Self-monitor behavior</td>
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<tr>
<td>Self-assess</td>
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<tr>
<td>Set and attain goals</td>
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<tr>
<td>Manage time</td>
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<tr>
<td>Ask strategic questions</td>
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<tr>
<td>Check for accuracy</td>
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<tr>
<td>Revise</td>
<td></td>
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<tr>
<td>Reflect</td>
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</table>

**What I’m wondering:**

**Next steps:**
Formative Assessment and Support

Knowing Students Across Multiple Dimensions

**Annotated Tool**

Use this tool to support the beginning teacher to learn about students beyond their academic performance. This will help beginning teachers as they consider ways to engage students and differentiate instruction. This process is appropriate for the entire class, subgroups, or individual students.

### Possible sources of information about students' personal context:
- Primary language assessment
- Focused journal entries: culture, family history, community, and school experiences
- Informal observations and conversations with students

### Possible sources of information about students' individual preferences:
- Learning style inventory
- Multiple intelligence survey
- Interest inventory
- Modality inventory
- Goal inventory
- Preferred environment checklist
- Journal entries: life experiences, goals, talents, hobbies

### Possible sources of information about students' meta-cognitive skills:
- Student goal-setting
- Survey on habits of mind (persistence, managing impulsivity, etc.)
- Daily work planner and log
- Revision checklist and rubrics
- Reading/subject area journal
- Journal entries: self-regulation strategies, time management, reflections
- Informal observations and conversations with students

### Formative Assessment Tool

#### Knowing Students Across Multiple Dimensions

<table>
<thead>
<tr>
<th>Name</th>
<th>Grade</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>Subject Area</td>
<td>Period</td>
</tr>
</tbody>
</table>

**Analysis from:**
- Sub-group
- Whole Class
- Case Study Student

**Suggested use:** Talk with your mentor about what you know (or don’t know) about your students across multiple dimensions.

#### Personal Context

- Social-cultural traditions
- Non-school literacies
- Home and community background
- Primary language
- Educational histories
- Perceptions
- Life-experiences

#### Individual Preferences

- Learning style preferences
- Multiple intelligences
- Friends and hobbies
- Aptitudes
- Learning environment (setting, lighting, sound, time of day)
- Emotional competencies

#### Meta-cognitive Skills

- Study and learning skills
- Ability to:
  - Self-monitor behavior
  - Set and achieve goals
  - Manage time
  - Ask strategic questions
  - Check for accuracy
  - Revise
  - Reflect

### What I know:

### What I'm wondering:

### Next steps:

Once information has been reviewed, support the beginning teacher to summarize general thoughts and set next steps.

**Note to the Mentor:**

Many of the inventories and assessments mentioned are available in the **Knowing Students Across Multiple Dimensions Resource Packet**. Others are available through online resources. Inventories or assessments can also be co-developed by the mentor and the beginning teacher.

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Formative Assessment and Support Annotated Tool

Knowing Students
## Formative Assessment Tool

### Knowing Students Across Multiple Dimensions

**Name:** Marjie Warren  
**Mentor:** Alisha Pryce  
**Grade Level/Subject Area:** Third grade  
**Date:** 9/8

**Analysis focus:**  
- [ ] Sub-group  
- [x] Whole Class  
- [ ] Case Study Student

**Suggested use:** Talk with your mentor about what you know (or don’t know yet) about your students across multiple dimensions.

<table>
<thead>
<tr>
<th>Personal Context</th>
<th>What I know:</th>
</tr>
</thead>
</table>
| - Socio-cultural traditions  
- Non-school literacies  
- Home and community background  
- Primary language  
- Educational histories  
- Perceptions  
- Life experiences  |
| in 48% of the homes, a language other than English is primarily spoken in the home. Both parents in many families work outside the home. Most students take the bus to school. About 30% of the parents have a college degree or higher. One student has just arrived from China. |

<table>
<thead>
<tr>
<th>Personal Context</th>
<th>What I’m wondering:</th>
</tr>
</thead>
</table>
|                  | How to effectively communicate and involve parents in our classroom community?  
                  | What to do with the information I’ve found about student background, interests, hobbies, etc.? |

<table>
<thead>
<tr>
<th>Personal Context</th>
<th>Next steps:</th>
</tr>
</thead>
</table>
|                  | Plan class building activities based on the information from pre-assessment surveys and questionnaires.  
                  | Plan a parent night (maybe a potluck) so parents can become acquainted. |

<table>
<thead>
<tr>
<th>Individual Preferences</th>
<th>What I know:</th>
</tr>
</thead>
</table>
| - Learning style preferences  
- Multiple intelligences  
- Interests and hobbies  
- Aptitudes  
- Learning environment (seating, lighting, sound, time of day)  
- Emotional competencies  |
| Most students enjoy working in small groups, but do not always have appropriate group skills and manners.  
They are energetic and need to have opportunities to move. They are interested in using and exploring with technology. |

<table>
<thead>
<tr>
<th>Individual Preferences</th>
<th>What I’m wondering:</th>
</tr>
</thead>
</table>
|                        | How to build social skills along with the academic skills?  
                        | How to work with students who refuse to work with another student?  
                        | How to integrate more hands-on activities and technology into lessons and units? |

<table>
<thead>
<tr>
<th>Individual Preferences</th>
<th>Next steps:</th>
</tr>
</thead>
</table>
|                        | Select a “social skill” of the day. Is there a list?  
                        | Use internet resources to find technology-rich activities. Ask grade level team for ideas. |

<table>
<thead>
<tr>
<th>Meta-cognitive Skills</th>
<th>What I know:</th>
</tr>
</thead>
</table>
| - Study and learning skills  
- Ability to:  
  - Self-monitor behavior  
  - Self-assess  
  - Set and attain goals  
  - Manage time  
  - Ask strategic questions  
  - Check for accuracy  
  - Revise  
  - Reflect  |
| Students are very social and sometimes in ways that are not productive. Students take pride in their work, yet are not always focused during independent or group work. Partner work seems to be more focused. |

<table>
<thead>
<tr>
<th>Meta-cognitive Skills</th>
<th>What I’m wondering:</th>
</tr>
</thead>
</table>
|                      | How can I develop students’ empathy for others so that group work will be productive, focused and engaging?  
                      | What class building and team building strategies will help with social skill and group development? |

<table>
<thead>
<tr>
<th>Meta-cognitive Skills</th>
<th>Next steps:</th>
</tr>
</thead>
</table>
|                      | Look at resources for class and team building strategies. Ask my mentor for advice.  
                      | Plan more partner activities to support students in learning social skills and staying focused prior to moving to larger group work.  
                      | Provide opportunities for students to self-assess their behavior when working collaboratively. |
## Formative Assessment Tool

**Knowing Students Across Multiple Dimensions**

**Name:** Diana Perez  
**Mentor:** George Lee  
**Grade Level/Subject Area:** 9th grade Integrated Math I  
**Date:** 9/12

### Analysis Focus:
- [ ] Sub-group  
- [x] Whole Class  
- [ ] Case Study Student

*Suggested use: Talk with your mentor about what you know (or don’t know yet) about your students across multiple dimensions.*

#### Personal Context
- Socio-cultural traditions
- Non-school literacies
- Home and community background
- Primary language
- Educational histories
- Perceptions
- Life experiences

**What I know:**
All students live in the school’s neighborhood. Some attend the same church youth group. Many students are native Spanish speakers and conversationally proficient in English. 10 students have used the after-school tutoring service in the last month.

**What I’m wondering:**
How many students stay after school for sports/clubs/music?

#### Individual Preferences
- Learning style preferences
- Multiple intelligences
- Interests and hobbies
- Aptitudes
- Learning environment (seating, lighting, sound, time of day)
- Emotional competencies

**What I know:**
Based on observations and classwork, many students have difficulty staying on task during independent work, and some are challenged/distressed by working in group (get off task quickly, need lots of verbal reminders or me to stand by them)

**What I’m wondering:**
How might I set up my groups more intentionally to help all students stay focused on in-class work and demonstrate what they know and can do?

**Next steps:**
Work with mentor to reconfigure seating/instructional groups. Continue observing group work and individual performances.

#### Meta-cognitive Skills
- Study and learning skills
- Ability to:  
  - Self-monitor behavior
  - Self-assess
  - Set and attain goals
  - Manage time
  - Ask strategic questions
  - Check for accuracy
  - Revise
  - Reflect

**What I know:**
Start of the year interest survey shows that many students enjoy math and feel capable of using math skills in “real life.” 6 students reported negative feelings about math (all girls).

**What I’m wondering:**
What are the study habits and performance levels of the 6 students that expressed negative experience/outlook re: math?

**Next steps:**
Review grades/comments assigned at end of 8th grade for those six students. Ask all students to set/share one math or study-skills goal as a part of their homework.
## Formative Assessment Tool

### Knowing Students Across Multiple Dimensions

<table>
<thead>
<tr>
<th>Grade Level/Subject Area:</th>
<th>5th Grade</th>
<th>Date:</th>
<th>10/9</th>
</tr>
</thead>
</table>

**Analysis focus:**
- □ Sub-group
- □ Whole Class
- ✓ Case Study Student

*Suggested use: Talk with your mentor about what you know (or don’t know yet) about your students across multiple dimensions.*

### Personal Context

- Socio-cultural traditions
- Non-school literacies
- Home and community background
- Primary language
- Educational histories
- Perceptions
- Life experiences

**What I know:**
Both parents work outside of the home. 2 younger siblings. Both Spanish and English are spoken at home. Martin qualified for Special Education in 2nd grade.

**What I’m wondering:**
What are Martin’s interests and activities at home after school?

**Next steps:**
Make phone contact with parent

### Individual Preferences

- Learning style preferences
- Multiple intelligences
- Interests and hobbies
- Aptitudes
- Learning environment (seating, lighting, sound, time of day)
- Emotional competencies

**What I know:**
Martin is a kinesthetic learner. He loves hands-on activities. He enjoys computer/video games. He has athletic skills. Although he enjoys playing with others, he often has disagreements and arguments with peers.

**What I’m wondering:**
How can more hands on (and technology) tasks be included in instructional activities?

**Next steps:**
Investigate instructional strategies and tasks that address Martin’s strengths

### Meta-cognitive Skills

- Study and learning skills
- Ability to:
  - Self-monitor behavior
  - Self-assess
  - Set and attain goals
  - Manage time
  - Ask strategic questions
  - Check for accuracy
  - Revise
  - Reflect

**What I know:**
Martin has a difficult time staying task on and completing assignments/tasks. He does his work quickly without looking over and checking for accuracy. Transitions are troublesome. On the survey, he noted organization of his desk, and backpack, as difficult.

**What I’m wondering:**
Would implementing a behavior contract be effective in helping Martin learn to self-monitor and change behaviors? Maybe we could try goal-setting.

**Next steps:**
Determine a primary behavior for contract focus. Find out from Martin what he would be interested in working toward as positive reinforcement for behavior.
Merrill Case Study

Merrill is 10.5 years old and in 5th grade. She lives with both parents and has 2 siblings. She is attending a new school in CMS this year as her family recently moved. She rides the bus to school, every day, and it was reported at the time of this case study that Merrill has perfect attendance.

Merrill loves art class in school and prefers to demonstrate her learning by drawing using lots of color in her artwork. When asked to respond with exit tickets she typically explains what she has learned using sketches. She is working on fractions in math and uses magnetic fraction strips that are supporting her in learning the concepts. She has also created her own personal fraction strips. She does have difficulties with story problems in her math class and will frequently ask a classmate for help. Her teacher mentioned that Merrill has success in connecting numerical operations when she connects concepts to real-life problems.

Merrill has been receiving IEP services since third grade for a Specific Learning Disability. She has strong verbal skills and has goals around fluency, decoding multisyllabic words, and spelling as she has difficulty with scanning, processing, and working memory. Her teacher recently reported that Merrill has exhibited some difficulty taking notes in her 5th grade class especially when the teacher uses the Smartboard and she is asked to copy from the board. Her teacher has been teaching Merrill to use highlighters to follow along in the text which allows her to go back to determine the main points highlighted. Her teacher also said she has been supporting Merrill with decoding by breaking down multisyllabic words. This strategy encourages Merrill to read her favorite adventure books.

Merrill does not feel like she “belongs” with her peers and classmates but wants to have friends. She becomes anxious with reading and sometimes shuts down when presented with a reading task. Her teacher stated that it appears she is daydreaming in class and she will often ask her classmates what she should be doing.
Mentor Professional Development Choices

We value you as a mentor. Our intent is to support you throughout the year in order to assure that your experience as a mentor is positive and effective. *All webinars are offered at 4:00 – 5:00 PM CST and 7:00 – 8:00 PM CST.* The choices for webinars have been designed to reflect the feedback we have received from past mentors. Participation in the webinars will allow you to:

- Earn a credit through UND by:
  - attending the October Seminar
  - participating in 3 webinars or Video Club during the school year
- Increase your effectiveness as a mentor
- Connect with other mentors in ND to brainstorm and problem solve

All webinars will be archived for mentors to review as needed. Webinars are offered in November, January and March in order to help support you as a mentor throughout the year and offer “just in time” tools and tips. If you are unable to attend three webinars over the course of the year, your stipend will be adjusted by $100 per semester.

Choose the Professional Development that best meets your needs as a Mentor Teacher by registering for one of the following webinars [here](https://canvas.instructure.com/courses/1379732).

<table>
<thead>
<tr>
<th>Choice A</th>
<th>Planning – Observing – Feedback on Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tuesday, November 5th Planning</strong> - Planning and preparing standards based instruction meets the needs of each and every student. Compare various planning tools to support new teachers as they plan standard based lessons.</td>
<td></td>
</tr>
<tr>
<td><strong>Tuesday, January 14th Observing</strong> - Observing and discussing data of new teacher practice sharpens mentors’ abilities to be strategic in their coaching practice. Review the high leverage observation strategies to support change in teacher practice.</td>
<td></td>
</tr>
<tr>
<td><strong>Tuesday, March 3rd Feedback on Standards</strong> - Practice giving specific and effective feedback to impact areas of focus or need in supporting new teacher growth.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Choice B</th>
<th>Trust – Language – Entry Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Thursday, November 7th Trust</strong> - Developing and maintaining trusting relationships impacts teacher effectiveness. Investigate the impact of relational trust on mentor teacher relationships.</td>
<td></td>
</tr>
<tr>
<td><strong>Thursday, January 9th Language</strong> - Employing language and stances of effective mentoring move teachers’ practice forward. Select those language stems and stances you can practice during your ongoing meetings with teachers.</td>
<td></td>
</tr>
<tr>
<td><strong>Thursday, March 5th Entry Points</strong> - Explore aspects of effective listening and a differentiated coaching model to tailor mentor/teacher interactions. Identify entry points that can support your new teacher(s) to become reflective practitioners.</td>
<td></td>
</tr>
</tbody>
</table>
## Choice C
**Students – Families – Colleagues – Building Relationships**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 14th <strong>Students</strong></td>
<td>The relational part of teaching is critical. Examine strategies to support new teachers in connecting and building strong relationships with students.</td>
</tr>
<tr>
<td>January 28th <strong>Families</strong></td>
<td>Positive family teacher communication positively impacts student learning. Families also benefit from relationships with the school community. Consider practices that new teachers can employ that encourage and reinforce communication with families.</td>
</tr>
<tr>
<td>March 24th <strong>Colleagues</strong></td>
<td>Research suggests that teachers are interested in collaborating with colleagues and can have a positive impact on themselves and the school climate. We will brainstorm action steps that allow new teachers to collaborate on a regular basis.</td>
</tr>
</tbody>
</table>

## Choice D
**Social Emotional Learning – Environment – Diverse Needs**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 19th <strong>SEL</strong></td>
<td>Understand the relationship between social emotional learning and academic success for students and new teacher performance.</td>
</tr>
<tr>
<td>January 16th <strong>Environment</strong></td>
<td>Discuss the vital beliefs and components for new teachers to embrace when developing a positive and productive classroom environment that anticipates and accepts all learners.</td>
</tr>
<tr>
<td>March 19th <strong>Diverse Needs (OLE)</strong></td>
<td>Embrace the purpose and use of the OLE Framework to address the social emotional needs of learners and the curriculum demands for new teachers to meet the diverse needs of their learners.</td>
</tr>
</tbody>
</table>

## Choice E
**Diversity/Equity – Variability of Learners – Universal Design for Learning**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 21st <strong>Diversity/Equity</strong></td>
<td>Understand the importance and practice of having authentic conversations about equity and diversity with new teachers.</td>
</tr>
<tr>
<td>January 30th <strong>Variability of Learners</strong></td>
<td>Examine the impact of new teachers’ mindsets on the success of the variability of learners in their classroom.</td>
</tr>
<tr>
<td>March 26th <strong>UDL</strong> (technology for outcomes)</td>
<td>Explore Universal Design for Learning (UDL) as a framework for new teachers to support the design of equitable classroom practices.</td>
</tr>
</tbody>
</table>

## Choice F
**Video Club**

The NDTSS Video Club offers you an opportunity to work with partners or small groups to video record, reflect, and collaborate with other teachers to refine your mentoring skills. You may choose your learning partner or we will connect you with another mentor in North Dakota.

This professional learning choice starts in October and ends in May. You will participate in four cycles of video recording and feedback, using the TORSH learning platform. The NDTSS will support you in getting started with TORSH and work with you throughout the course.