Personalization vs Differentiation vs Individualization

by Barbara Bray and Kathleen McClaskey

"The only thing that interferes with my learning is my education."
Albert Einstein

Personalization vs Differentiation vs Individualization

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There is a difference between personalization and differentiation and individualization. The first is learner-centered; the others are teacher-centered. There seems to be confusion in the education world about the differences and comparisons of these three terms as they relate to the learner.

The U.S. Department of Education defined the terms: personalization, differentiation, and individualization in the 2010 Education Technology Plan:

> **Individualization** refers to instruction that is paced to the learning needs of different learners. Learning goals are the same for all students, but students can progress through the material at different speeds according to their learning needs. For example, students might take longer to progress through a given topic, skip topics that cover information they already know, or repeat topics they need more help on.
>
> **Differentiation** refers to instruction that is tailored to the learning preferences of different learners. Learning goals are the same for all students, but the method or approach of instruction varies according to the preferences of each student or what research has found works best for students like them.
>
> **Personalization** refers to instruction that is paced to learning needs, tailored to learning preferences, and tailored to the specific interests of different learners. In an environment that is fully personalized, the learning objectives and content as well as the method and pace may all vary (so personalization encompasses differentiation and individualization).

http://www.ed.gov/technology/draft-netp-2010/individualized-personalized-differentiated-instruction

The definitions the Ed Tech plan describes focuses on instruction -- not personalizing learning. These definitions motivated us to create a chart that compares these terms. We created this chart to provide a resource as a reference to the three terms and how the terms "Personalization," "Personalized Learning" or "Personalizing Learning" focus on the learner not instruction. We determined that using the term "learners" was a more accurate term than "students" in all learning environments. We see learning happening anywhere at anytime with anyone.

Personalization vs Differentiation vs Individualization Chart

Personalization	Differentiation	Individualization
starts with the learner	starts with groups of learners	starts with the need of an individual learner
connects with interests, passions, and aspirations	adjusts to learning needs of groups of learners	accommodates learning needs of the individual
learners actively participate in the design of their learning	explicit instruction based upon the learning needs of groups of learners	explicit instruction based upon the learning needs of an individual learner
learners have a voice and choice on what they learn	teachers create or adapt instruction and choose roles for learners based on different needs of learners	teachers customize lessons and tasks for learners based on individual needs
different objectives for each learner	same objectives for groups of learners	same objectives for learners with specific objectives for individuals who receive one-on-one support
learner selects appropriate technology and resources to support their learning	technology and resources are selected to support the learning needs of groups of learner	technology and resources are selected to support the learning needs of an individual learner
learners build a network of peers, experts, teachers, and paraprofessionals to guide and support their learning	learners are reliant on the guidance of teachers to support their learning	learners are dependent on individual teachers or para-professionals to support their learning
competency-based models where the learner demonstrates mastery	based on Carnegie unit (seat time) and grade level	based on Carnegie unit (seat time) and grade level
assessment AS learning	assessment FOR learning	assessment OF learning
teachers develop capacity to create independent learners who set goals, monitor progress, and reflect on learning and summative assessments based on student mastery	assessment involves time-based testing and teachers provide feedback to advance learning	summative assessment is grade-based and involves time-based testing which confirms what learners know and don't know

Chart Explained: Barbara Bray (barbarabray.net) & Kathleen McClaskey (edtech-associates.com)   3

Chart Explained

This chart spurred discussions from educators around the world about the term, personalized learning. Not only were there thousands of daily hits and multiple requests for the chart, we were asked many questions to clarify different elements of the chart. We used some of these questions to expand on the chart for schools and organizations to have background information and resources to support their discussions. The questions we focused on for clarification purposes include:

- What does teaching and learning look like as it relates to these terms?
- How do we determine the learner's needs?
- How does the learner participate in their learning?
- How are objectives determined for the learner?
- How do learners support their learning?
- What is learning based on?
- How do you assess learning?

What does teaching and learning look like as it relates to these terms?

Personalization	Differentiation	Individualization
starts with the learner	starts with groups of learners	starts with the need of an individual learner

In an individualized learning environment, the learner's needs are identified through evaluations based on their challenges or disabilities. The teacher reviews the findings and recommendations from the evaluations with other professionals to adapt materials and instruction for an individual learner with cognitive or physical challenges.

> *"If you remove the veil of disability, you can see the learner."*
> **Kathleen McClaskey**

In a differentiated learning environment, learners are identified based upon their challenges in a specific content area and skill levels. The teacher uses existing differentiated curriculum or adapts instruction to meet the needs of different groups of learners.

In a personalized learning environment, learning starts with the learner. The learner understands how they learn best so they can become an active participant in designing their learning goals along with the teacher.

How do we determine the learner's needs?

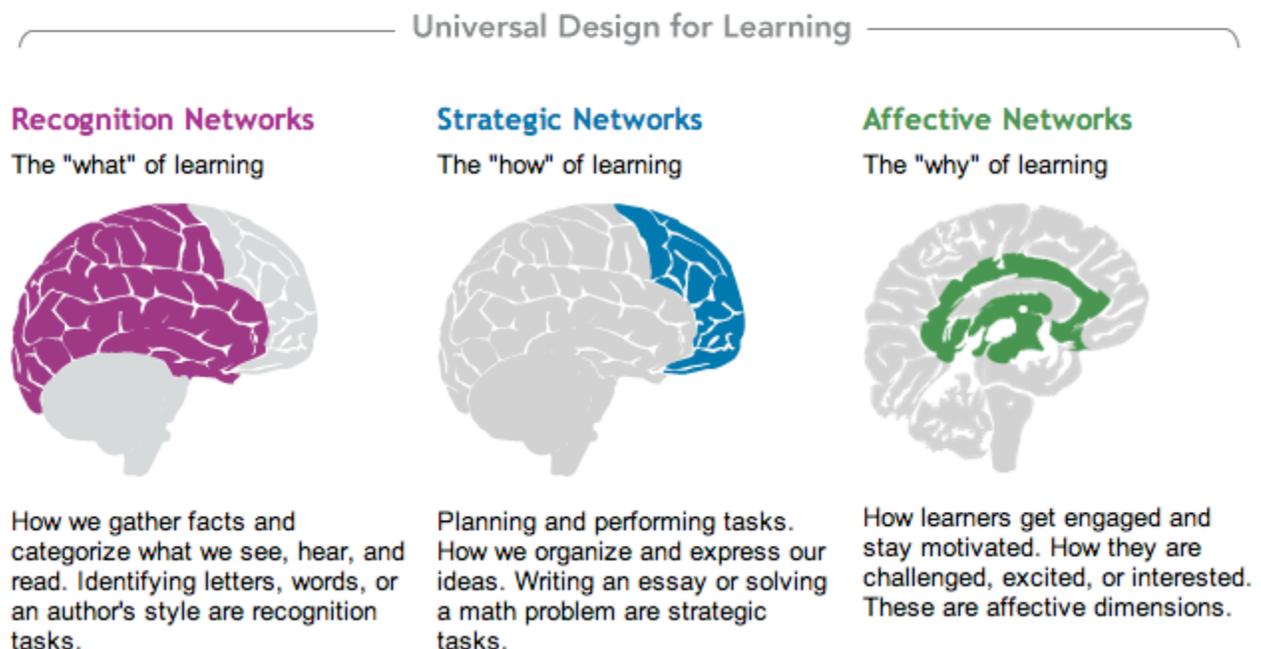| Personalization	Differentiation	Individualization
connects with interests, passions, and aspirations	adjusts to learning needs of groups of learners	accommodates learning needs of the individual

We can determine each learner's needs by using an adapted version of the UDL (Universal Design for Learning) Class Learning Profile where a learner can understand their strengths, weaknesses, aptitudes, interests, talents, and, yes, aspirations. CAST (Center for Applied Special Technology) states that common sense tells us that each learner is unique.

Using the Class Learning Profile, teachers discover how learners learn best and how they like to:
- access content information and the type of format content is in
- express what they know
- engage with content

Why is UDL necessary?

Individuals bring a huge variety of skills, needs, and interests to learning. Neuroscience reveals that these differences are as varied and unique as our DNA or fingerprints. Three primary brain networks come into play:

Universal Design for Learning

Recognition Networks
The "what" of learning

Strategic Networks
The "how" of learning

Affective Networks
The "why" of learning

How we gather facts and categorize what we see, hear, and read. Identifying letters, words, or an author's style are recognition tasks.

Planning and performing tasks. How we organize and express our ideas. Writing an essay or solving a math problem are strategic tasks.

How learners get engaged and stay motivated. How they are challenged, excited, or interested. These are affective dimensions.

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An individualized learning environment usually involves learners with special needs where they have an individual education plan (IEP). These learners have been evaluated to determine their strengths and weaknesses in areas such as: reading, math, writing and other cognitive challenges. From these evaluations, a set of measurable goals are determined along with accommodations for the individual learner in an IEP. An agreement by the IEP Team is needed to implement them. Implementation can include out of classroom one-to-one instruction and/or tutoring plus classroom accommodations by the teacher with frequent support by an instructional aide.

Differentiation is responsive teaching rather than "one size fits all" teaching where teachers proactively plan varied approaches to what different groups of learners need to learn, how they will learn it, and/or how they will show what they have learned. According to Carol Tomlinson from Differentiation Central (Differentiationcentral.com), differentiating instruction increases the likelihood that each learner will learn as much as he or she can, as efficiently as possible.

"I am always ready to learn although I do not always like being taught."
Winston Churchill

In a personalized learning environment, we see the value of the UDL class learning profile for all learners to understand how they learn best. For learners to understand how they learn, a learner version of the profile tool could be used to help them share with their teachers how they would like to acquire information, express what they know and what ways they like to engage with the content. Learners are more motivated to learn and be engaged in the learning process if the learning activity is meaningful and relevant to them.

"Find your passion. Go with your strengths."
Barbara Bray

Acknowledging other learning environments, CAST (Center for Applied Special Technology) made the change from using the word "student" to "learner" in the UDL Guidelines 2.0, because the term "student" is too narrow. Student implies someone who is in the classroom. CAST realized that learning happens in many different learning environments where the term student might not be traditionally applied (e.g. museums, after-school programs, adult learning, etc.) The word learner was therefore chosen because of the ranges of situations to which it could apply. http://www.udlcenter.org/aboutudl/udlguidelines/changes

How does a learner participate in their learning?

Personalization	Differentiation	Individualization
learners actively participate in the design of their learning	explicit instruction based upon the learning needs of groups of learners	explicit instruction based upon the learning needs of an individual learner
learners have a voice and choice on what they learn	teachers create or adapt instruction and choose roles for learners based on different needs of learners	teachers customize lessons and tasks for learners based on individual needs

In an individualized learning environment, learning is passive. Teachers or para-professionals deliver instruction to individual learners. The learner has no voice in the design of their instruction or choice in what they learn in this environment. The instruction is based on each learner's needs.

In a differentiated classroom, learners can be passive participants in their learning. Teachers use direct instruction that they differentiated based upon the learning needs of different groups of learners in their classroom. Some teachers may set up learning stations or flip the classroom with multiple ways of showing the same content to different types of learners. This confuses educators into thinking that if they flip the classroom, some teachers consider that learners are personalizing their learning. But, actually, learners are still passively receiving content and directions on what to learn. When learners have choices to interact with the content, discuss what they watched, read, or learned the night before, they are actively participating as learners. However, this is still not personalizing learning. The teacher still chose the topics and how learners demonstrate understanding.

> *"School is torture because I am required to spend all my time doing menial tasks, worksheets, and rote memorization. This takes too much time away from being able to discover my hobbies, interests, or passions. I don't foresee having the ability to do that before I graduate high school."*
> **Adam Ritter, 10th grade student ([Facebook](#))**

When a learner personalizes their learning, learners actively participate and drive their learning. They have a voice in what they are learning based on how they learn best. Learners have a choice in how they demonstrate evidence of their learning. Learners own and co-design their learning. The teacher is their guide on their personal journey.

How are objectives determined for the learner?

Personalization	Differentiation	Individualization
different objectives for each learner	same objectives for groups of learners	same objectives for learners with specific objectives for individuals who receive one-on-one support

When you individualize learning, learners may have the same objectives as all the learners in the class. However, there can be specific objectives for learners who may need one-on-one support. Teachers or para-professionals then support and provide accommodations for individual learners to meet these specific objectives.

To differentiate learning, a teacher identifies the same objectives for different groups of learners. Teachers use and analyze data to identify the different learners in their classroom. From this data, they can use, adapt, or create different lessons or resources on a concept around the same objectives based on the different group of learners.

To personalize learning, teachers and learners are co-designing objectives based on each learner's learning goals. There are different objectives for each learner. The learner drives their learning and owns their learning. The learner follows the objectives, monitors their progress in meeting the objectives, and reflects on their progress.

"The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn."
Alvin Toffler

How do learners support their learning?

Personalization	Differentiation	Individualization
learner selects appropriate technology and resources to support their learning	technology and resources are selected to support the learning needs of groups of learner	technology and resources are selected to support the learning needs of an individual learner
learners build a network of peers, experts, teachers, and paraprofessionals to guide and support their learning	learners are reliant on the guidance of teachers to support their learning	learners are dependent on individual teachers or para-professionals to support their learning

In an individualized learning environment, tools and resources are selected by the teacher and are sometimes recommended by an evaluator, special education professional or consultant. The tools could include specialized software and/or hardware that supports the specific IEP goals agreed to by the IEP Team. In the best cases, teachers or para-professionals learn how to use theses specialized tools so that they can instruct students in the use of these tools to support their learning. If these tools are used consistently, the learner then adopts them as part of their toolkit.

In a differentiated learning environment, the teacher selects the tools and resources for the groups of learners based upon the activities or products that are included in the lesson. The teacher also considers how appropriate a tool or resource is for the different groups of learners. The learner may be able to choose content or a resource based upon their reading or skill level.

In a personalized learning environment, learners can access appropriate tools to support their learning. They have critical thinking skills so they can self select the tools they need to support any learning task, whether at a school or home. ICT (Information and Communication Technology) literacy would be an essential skill in a personalized learning environment. As 21st century learners, they collaborate, share, and learn with their peers, experts, and other learners around the world.

"ICT literacy is the ability to choose and use the technology for the task."
Kathleen McClaskey

What is learning based on?

Personalization	Differentiation	Individualization
competency-based models where the learner demonstrates mastery	based on Carnegie unit (seat time) and grade level	based on Carnegie unit (seat time) and grade level

In individualized and differentiated learning environments, learners are awarded credit for classes on the basis of the Carnegie unit that plays a powerful role in managing transactions within the education system. First, it provides a unit of exchange to allow different schools and institutions to relate to each other, especially the transition from high school to college. Second, the Carnegie unit is based upon the amount of time that a teacher is in front of a classroom and the time learners are in school. It doesn't take into account how effective the teacher is, how much time and effort the teacher contributes outside the classroom, or how much time and effort learners contribute.

Competency-based pathways are based on mastery not on seat time which expects teachers to help all learners succeed in mastering skills.

iNACOL (International Association for K-12 Online Learning) developed a website on "Competency-Based Pathways" that describes five design principles.

Design Principle 1: Students (Learners) Advance upon Mastery

Design Principle 2: Explicit and Measurable Learning Objectives Empower Students (Learners)

Design Principle 3: Assessment Is Meaningful and a Positive Learning Experience for Students (Learners)
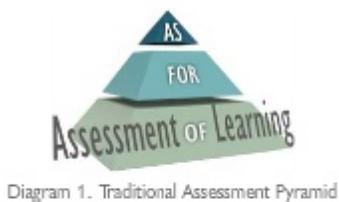
Design Principle 4: Students (Learners) Receive Rapid, Differentiated Support

Design Principle 5: Learning Outcomes Emphasize Include Application and Creation of Knowledge

We have inserted "Learners" in parenthesis wherever the word "Students" is listed.

How do you assess learning?

Personalization	Differentiation	Individualization
assessment AS learning	assessment FOR learning	assessment OF learning
teachers develop capacity to create independent learners who set goals, monitor progress, and reflect on learning and summative assessments based on student mastery	assessment involves time-based testing and teachers provide feedback to advance learning	summative assessment is grade-based and involves time-based testing which confirms what learners know and don't know

Diagram 1. Traditional Assessment Pyramid

Diagram 2. Reconfigured Assessment Pyramid

British Columbia created an interactive discussion guide on Personalized Learning. On page 18 of the PDF guide, they state that "student assessment is the process of gathering evidence of what a student knows, understands and is able to do and determines how well they are achieving the learning outcomes."

The report Rethinking Classroom Assessment with Purpose in Mind shows the focus has been on assessment of learning where teachers measure student learning after the fact (Diagram 1). To ensure learners are acquiring essential skills such as self-regulation, a shift towards assessment as learning is required where learners evaluate and adapt their own learning (Diagram 2).

Assessment *of* learning (Individualization) refers to strategies designed to confirm what learners know, demonstrate whether or not they have met curriculum outcomes or the goals of their individualized programs, or to certify proficiency and make decisions about learners' future programs or placements.

Effective assessment of learning requires that teachers provide:

- a rationale for undertaking a particular assessment of learning at a particular point in time.
- clear descriptions of the intended learning.
- processes that make it possible for students to demonstrate their competence and skill.
- a range of alternative mechanisms for assessing the same outcomes.
- public and defensible reference points for making judgements.
- transparent approaches to interpretation.
- descriptions of the assessment process.
- strategies for recourse in the event of disagreement about the decisions.

Assessment *for* learning (Differentiation) occurs throughout the learning process. It is interactive, with teachers:

- aligning instruction with the targeted outcomes.
- identifying particular learning needs of learners or groups.
- selecting and adapting materials and resources.
- creating differentiated teaching strategies and learning opportunities for helping individual learners move forward in their learning.
- providing immediate feedback and direction to learners.

Assessment for learning provides information about what learners already know and can do, so that teachers can design the most appropriate next steps in instruction.

Assessment *as* learning (Personalization) is based in research about how learning happens, and is characterized by learners reflecting on their own learning and making adjustments so that they achieve deeper understanding. The teacher's role in promoting the development of independent learners through assessment **as** learning is to:

- model and teach the skills of self-assessment.
- guide learners in setting goals, and monitoring their progress toward them.
- provide exemplars and models of good practice and quality work that reflect curriculum outcomes.
- work with learners to develop clear criteria of good practice.
- guide learners in developing internal feedback or self-monitoring mechanisms to validate and question their own thinking, and to become comfortable with the ambiguity and uncertainty that is inevitable in learning anything new.
- provide regular and challenging opportunities to practise, so that learners can become confident, competent self-assessors.
- monitor learners' meta-cognitive processes as well as their learning, and provide descriptive feedback.
- create an environment where it is safe for learners to take chances and where support is readily available.

Reporting in assessment **as** learning is the responsibility of learners, who must learn to articulate and defend the nature and quality of their learning. When learners reflect on their own learning and must communicate it to others, they are intensifying their understanding about a topic, their own learning strengths, and the areas in which they need to develop further.

"I am still learning."
Michelangelo

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Contact us if you have any questions, comments, want to make changes to the chart, want us to write about how you are using the chart, or would like us to help you personalize learning:

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