"Learner Centered Environment"

What is Learner-centered Teaching?

The term, "learner-centered" describes a concept and a practice in which students and [teachers] learn from one another. It proposes a global shift away from instruction that is fundamentally teacher-centered, at times glibly termed "sage on the stage," focusing instead on learning outcomes. It is not intended to diminish the importance of the instructional side of the classroom experience. Instead, instruction is broadened to include other activities that produce desirable learning outcomes. Learner-centered teachers articulate what we expect our students to learn, design educational experiences to advance their learning, and provide opportunities for them to demonstrate their success in achieving those expectations.

A learner-centered environment grows out of curricular decisions and in-class strategies which encourage students' interaction with the content, with one another and the teacher, and with the learning process. It encourages students' reflection, dialogue, and engagement, and requires a reliable assessment of their content mastery.

Excerpted from Learner Centered Teaching from the Center for Excellence in Teaching, University of Southern California

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The Alliance for Excellent Education recently released... a report [that] advocates that a culture shift to a learner centered classroom environment is needed to prepare students to meet the challenges and demands of a global economy, that:
1) Learning needs to be rigorous and based on college and career-ready expectations.
2) Learning is personalized.
3) Learning is collaborative, relevant, and applied.
4) Learning is flexible, taking place anytime, anywhere.

Excerpted from How Can Teachers Create a Learner-Centered Environment? By Patrick Ledesma, Education Week Teacher June 11, 2012

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Resources to Learn More About Learner Centered Environments/Personalized Learning

- www.competencyworks.org
- www.studentsatthecenterhub.org Nellie Mae and Jobs for the Future – excellent resource. In particular: http://studentsatthecenterhub.org/resources/
- www.achieve.org - in particular: http://achieve.org/CBPCommunicationsToolkit
- www.greatschoolspartnership.org - in particular:
  - http://www.greatschoolspartnership.org/presentations/
  - http://www.greatschoolspartnership.org/webinar-archive/
  - http://www.greatschoolspartnership.org/webinar-archive/
- http://assessment.uconn.edu/docs/TeacherCenteredVsLearnerCenteredParadigms.pdf

Teacher-centered vs. Learner-centered paradigms

Comparison of Teacher-centered and Learner-centered paradigms (Learner-Centered Assessment on College Campuses by Huba and Freed 2000)	
Teacher-Centered Paradigm	**Learner-Centered Paradigm**
Knowledge is transmitted from professor to students	Students construct knowledge through gathering and synthesizing information and integrating it with the general skills of inquiry, communication, critical thinking, problem solving and so on
Students passively receive information	Students are actively involved
Emphasis is on acquisition of knowledge outside the context in which it will be used	Emphasis is on using and communicating knowledge effectively to address enduring and emerging issues and problems in real-life contexts
Professor's role is to be primary information giver and primary evaluator	Professor's role is to coach and facilitate Professor and students evaluate learning together
Teaching and assessing are separate	**Teaching and assessing are intertwined**
Assessment is used to monitor learning	**Assessment is used to promote and diagnose learning**
Emphasis is on right answers	Emphasis is on generating better questions and learning from errors
Desired learning is assessed indirectly through the use of objectively scored tests	**Desired learning is assessed directly through papers, projects, performances, portfolios, and the like**
Focus is on a single discipline	Approach is compatible with interdisciplinary investigation
Culture is competitive and individualistic	Culture is cooperative, collaborative, and supportive
Only students are viewed as learners	Professor and students learn together

Teacher-centered vs. Learner-centered paradigms

TEACHING-CENTERED versus LEARNING-CENTERED instruction (Assessing Academic Programs in Higher Education by Allen 2004)		
Concept	**Teacher-Centered**	**Learner-Centered**
Teaching goals	• Cover the discipline	• Students learn: o How to use the discipline o How to integrate disciplines to solve complex problems o An array of **core learning objectives,** such as communication and information literacy skills
Organization of the curriculum	• Courses in catalog	• Cohesive program with systematically created opportunities to synthesize, practice, and develop increasingly complex ideas, skills, and values
Course structure	• Faculty cover topics	• **Students master learning objectives**
How students learn	• Listening • Reading • Independent learning, often in competition for grades	• Students construct knowledge by integrating new learning into what they already know • Learning is viewed as a cognitive and social act
Pedagogy	• Based on delivery of information	• Based on engagement of students
Course delivery	• Lecture • Assignments and exams for summative purposes	• Active learning • Assignments for formative purposes • Collaborative learning • Community service learning • Cooperative learning • Online, asynchronous, self-directed learning • Problem-based learning
Course grading	• Faculty as gatekeepers • Normal distribution expected	• **Grades indicate mastery of learning objectives**
Faculty role	• Sage on the stage	• Designer of learning environments
Effective teaching	• Teach (present information) well and those who can will learn	• Engage students in their learning • Help all students master learning objectives • **Use classroom assessment to improve courses** • **Use program assessment to improve programs**

Connecticut Association of Public Schools Superintendents

Elementary School

Students lead learning at Nathan Hale Elementary School by working with teachers to develop individual learning plans, identify personal learning targets and demonstrate they have met their goals. In the upper grades, student-led meetings have transformed parent-teacher conferences.

Lucas is in the fourth grade. He has many interests and talents, but has struggled with math. He is eager to lead the conference with his parents and his teacher, Ms. Cameron, especially to demonstrate the progress he has made in the first half of the year. At the beginning of the year, Lucas and Ms. Cameron crafted individual learning targets and discussed various strategies to meet them. As Lucas reflected on his learning style, he shared his interests, strengths, and challenges with Ms. Cameron. Lucas also had access to an educational software program that tailors resources for Lucas to support his learning based on his preference and styles. The learning plan leverages Lucas' interests to make math more accessible. Lucas is excited about math for the first time.

To prepare for the conference, Ms. Cameron helped Lucas compile his work in an electronic portfolio. Showing the portfolio to parents, he said, "I can't just tell you I'm good at this. I had to gather evidence." The portfolio included learning targets and examples of work to show how he has met them. He is particularly proud of mastering fractions: "When we started, everything was a challenge. But Ms. Cameron pushed me to go places I never thought I could!" Assessments before each unit allow Ms. Cameron to provide targeted support. Using this information, Ms. Cameron quickly identified Lucas' challenges with fractions. When she learned that he has studied piano since first grade, she found lessons that he could do at the piano that allowed him to use musical skills to explore mathematical concepts. Connecting academic goals with Lucas' interests provided a scaffold between his current knowledge and developing skills. Building on his strengths motivated him to tackle his challenges.

Before the conference ended, Ms. Cameron prompted Lucas to share his on-going successes. An advanced reader, Lucas often leads mini-lessons for his classmates. Before each new unit, Ms. Cameron introduces the learning targets and gives a pre-assessment to see what students already know and how to target support. In reading, Lucas often demonstrates mastery on the pre-assessment, and then helps explain the concepts to his classmates. Teaching his classmates allows Lucas to develop multiple skills, academic and social, and helps deepen his own knowledge. In addition, teaching develops his leadership skills as he helps other students meet their learning targets.

Lucas' parents were amazed with his progress and his self-confidence. "What's so different about fourth grade?" they asked. He laughed, "Now I'm the boss of me!" At Nathan Hale, teachers allow students to make choices and only direct them if they aren't making good choices or fail to challenge themselves. Having a voice in his education keeps Lucas engaged and pushes him to achieve his goals.

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Middle School

Lily Takai is fascinated by robots. "When I visit my family in Japan I'm amazed at what robots can do. There was even one at my Obaasan's hospital!" When she was 9, her family flew to Japan because her grandmother got very sick. Obaasan Aiko was in a nursing home that pioneered the use of therapeutic robots – in this case, PARO, a robot that looks and acts like a baby seal. "When I patted PARO he wriggled around, just like a real animal!" When they returned home to Connecticut, Lily learned everything she could about robots and built toy robots from kits. Now that she's in middle school, Lily was thrilled to join the robotics club.

The after-school robotics club meets at the tech incubator run jointly by the town and the school district. The incubator's mission is to foster STEM careers and STEM education. It provides workspace and mentoring for start-up companies and hands-on learning opportunities for district students. One of the opportunities is the robotics club, which fields middle school and high school teams for the national FIRST Robotics competitions. Employees from a robotics company coach the teams.

FIRST Robotics competitions focus on real-world scientific challenges; in 2015, students in the middle grades are participating in the FIRST LEGO League's Trash Trek. During the yearlong competition, the team builds robots to compete in regional and national trials of the Trash Trek game. Teams earn points for building robots of recyclable parts, programming the robots to move trash (represented by LEGO pieces) through processes to recycle, landfill, or compost used materials.

Although the robotics team takes place outside of school, Lily is earning credit for computer science, engineering, problem-solving (a graduation competency,) as well as environmental science. In addition, Lily and her homeroom teacher are weaving her interest in robotics across the curriculum to accelerate Lily's mastery of the targets in her personalized learning plan.

While Lily is an advanced student in math and science, she struggles with reading comprehension. Knowing Lily's interest in science, Ms. Farley suggested Lily pull together a variety of materials to extend her knowledge of robotics and environmental science. Her teacher provided a list of books on Lily's current reading level but also advance texts to push her to improve.

Ms. Farley knows that building on Lily's interests provides motivation to learn and that her existing knowledge about robotics will provide a scaffold to understanding more advanced materials. They work together on reading strategies to help Lily dive into the materials, to focus her reading, and to construct meaning from the text. Ms. Farley and Lily meet biweekly to help Lily learn strategies to develop her reading comprehension and so Ms. Farley can assess her progress. In addition the learning platform knows Lily's passion for robotics, math, and science and has been sharing online articles at her reading level when she logs in every morning. Guided by Lily's "thumbs up" or "thumbs down" and her sharing things she likes, the platform shares articles that Lily likes to read, that include interests such as dancing.

Lily finds the robotics competition time-consuming, but invigorating. To support this "anytime, anywhere learning," the school helped students to carve out time when the team can work together. In Lily's case, she is earning credit for physical education through her weekend dance classes. Lily and her phys ed teacher worked with the dance studio to demonstrate her mastery of the performance indicators for physical education in middle school. Lily designed a fitness program to meet her personal fitness goals and developed a portfolio in which she describes how dance develops fitness components like balance, coordination, and agility. The portfolio will include a video not only of the dance recital, but also of the training needed to prepare for the performance.

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High School

Devon was surprised that Nina wanted to pair up to work on the civics project. "With your interest in science and nature, I thought you'd focus on something hands-on ...maybe the river cleanup project. Didn't your internship focus on water-quality?"

The high school juniors were sitting in their civics class, discussing the required community-based project. At Westfield High School, with the move toward "anytime, anywhere learning," the graduation requirement for civics includes a project in service of a community organization. Nina and Devon are earning mastery-based diplomas.

Although the process of earning a mastery-based diploma begins in middle school, in-coming high school students meet with their advisors to create a personalized learning plans to guide all four years of high school. It help each student shape a unique path to postsecondary education, careers, and life goals. To link learning with life goals, students are encouraged to pursue internships and other learning opportunities outside school. Within their personalized learning plans, Nina and Devon pursued internships to follow personal interests, explore career options, and earn academic credit. The civics project is another opportunity to connect learning to the world beyond school.

Advisors help student understand the graduation requirements and develop individualized learning targets to demonstrate mastery. Each student has an electronic portfolio to organize work that documents progress through their learning plan. The portfolios not only help Nina and Devon reflect on their learning with their parents and teachers, but also allows them to get feedback on what they are learning.

Devon, an African-American and the son of a law professor, is interested in civil rights. Hoping to follow in his mother's footsteps, he interned at the Legal Aid Society. Although environmental justice was a small part of legal aid work, he developed an interest in helping urban neighborhoods improve health and standards of living by addressing environmental issues. The internship inspired Devon; now he dreams of becoming an attorney specializing in environmental law and policy. As part of the internship, Devon wrote a report on differences in environmental policy across the New England states. It informed the work of Legal Aid and earned him academic credit for social studies and writing.

Nina, the daughter of Polish immigrants, is passionate about animals and the environment. Last fall she interned at the town of Westfield's water reservoir and purification plant. Although she initially sought the internship because of her love of nature, the experience put her science classes in context. "I didn't think of myself as good at science, but what we learned in chemistry class made sense when I worked at the water quality plant," She told Devon. The internship accelerated her understanding of biology and chemistry. Teachers worked with Nina to devise an individualized plan that would prepare her to take the biology Advanced Placement (AP) exam without enrolling in the AP biology course. Scoring well on the test would enable her to earn college credit.

Teachers and the principals at Westfield High have developed strong relationships with community organizations, which enable them to recruit organizations to participate in the civics project. Their involvement builds community support for schools. Students select organizations based on their interests and work to complete a project that meets an organizational need.

This year, one of the participating organizations is an environmental justice coalition which helps residents in poor and minority communities gain access to information on health and safety and ensures that residents know their legal rights. The environmental justice group needs a new website. Developing the website will allow Devon and Nina to demonstrate mastery of graduation requirements for writing, computer science, and civics. The

project requires researching and writing about environmental issues facing Connecticut communities as well as the technical skills to create webpages. Devon started programming in elementary school and teaches Nina some basic HTML. The civics project allowed Nina and Devon to pursue their interests while completing the civics graduation requirement, demonstrating mastery of computer science and deepening their knowledge of environmental issues and policy.

Throughout the process, Nina and Devon were able to update their progress and share their products in their digital portfolio. Not only were they able to reflect on their learning with their parents and teachers, they were able to share what they learned with the wider community.