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EDTC 813
Advance Integrated Software Across the Curriculum
Assignment 4 Fifth Discipline-

System Thinking

According to Senge (2006), the conceptual framework which was developed through amassing information and tools used to clarify patterns and identify how to bring about effective change is what makes the fifth discipline, Systems Thinking. This concept which describes the integration of Personal Mastery, Mental Models, Building Shared Visions, and Team Learning to explain the theory and practice of how an organization, the group or individual, thinks, interacts, and learns from one another. Senge's original purpose of identifying what managers would need to understand to motivate positive change within a system was found valid for learning organizations as well.

Collective learning and shared vision are material to the inner development of systems thinking for an organization. Flipping a classroom is a demonstration of the use of system thinking to reimagine student learning and instruction. Students learning digital literacy skills within my flipped classroom activity, accessed information digitally, in a time and place that was not the normal school day setting, required that all stakeholders readjust their view of what learning looks like in and out of school activating their personal mastery discipline. This readjustment in the participants' mental models needed to occur, shifting the picture of where teaching takes place and the role of the classroom instructor. Taking on a flipped classroom model to be effective would not be possible without first building shared vision of the positive changes it can bring to what takes place in schools. School stakeholders would all need to have a desire to ensure that maximizing in class time for actively learning was worth the commitment of time, material, and personnel to impact this new approach. The team learning involved in

producing a flipped classroom model development of a true dialogue on the positive impact that could occur versus the realistic expectations of the quality of lessons design, access and support for the blended portion of the flip was paramount in the acceptance of the systematic change.

Personal Mastery

Relating Senge' Fifth Discipline to the incorporation of Universal Design for Learning (UDL), Constructivism in curriculum design and Flipped Classroom instructional designs for any institution attempting to enact change would be valid to systematically prepare for successful integration. Assessing the system components would include, how individual members learn, adapt, and feel about the proposed change to its current configuration. Is this new approach accepted, are members willing to learn more about how it benefits the organization? Personal Mastery, the discipline that addresses the way a person envisions, applies his or herself, level of patience, and objectivity is clearly important in all three of our projects.

Learners in any learning environment, business or school, need to apply the aspects of personal mastery to gain a level of knowledge attainment to enhance the continued growth of the organization. Students need to feel challenged to learn more, open to information and techniques used to instill that information. Instructors to facilitate the activities should maintain a continual search and learn process to employ and motive student learning and engagement. Educational systems that become mired down in inadequate thought processes are not prepared for systematic changes such as the requirements for UDL instructional design, the inclusion of green screen student centered learning activities or student designed formative assessments used in flipped classrooms.

The activities designed for each project, UDL, Constructivism, and Flipped Classroom all focused on requiring students to design, and define meaning. Student centered activities

requiring meaningful active learning that is descriptive, visual, and student produced. Making systematic changes in student instruction design, delivery and assessment requires that the staff and students understand the why and how these changes are relevant to the improvement of the way the current system behaves. The personal mastery of the individual vision was clearly needed to demonstrate collective cohesiveness in the program implementation.

Mental Models

Senge, describes mental models as “deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action” (p. 7). As a reflection of this discipline within the Blocks to Robots project, is using green screens to allow the students with disabilities to construct new meaning of their physically limited world. This activity supported group communication to explain and question their abilities. First, voicing the hidden view of what the student’s physical capabilities are then readjusting that visual picture. Exploring that vision distanced from his or her physical limitations allowing for others within the group to reshape their view in the process.

Building Shared Vision

The flipped classroom project more than any other showcased the building shared vision aspect of Senge’s disciplines. The systematic shift in programming that flipping a classroom requires would encompass having a true understanding of the school vision with a leader who can transform the vision of the school to one that is supportive of the necessary systematic changes that will be required. Mandating change will not be effective in a flipped approach if the stakeholders don’t share the vision. Taking the time to design, and build instructional videos using a tool such as Tellagamia to help students learn to use the digital resources, while not mandated shows the belief in the importance of providing support to effect positive outcomes.

Team Learning

The use of UDL designs in the production of learning material starts with the team learning, “dialogue,” as described by Senge. The ability of all its members to look at the needs of the learner in every situation. When designing using UDL guidelines it was important to have input from all stakeholders to understand what guidelines would provide the needed support for students, first breaking the belief that we all learn in the same way. Showing value for past experiences to reshape present beliefs. the capacity of members of a team to suspend assumptions and enter into a genuine “thinking together.” Redesigning learning activities to included multiple means of showing mastery using multimedia tools instead of worksheets. Taking assessment to a new medium that all stakeholders can find beneficial to the learner.

Senge, P. M. (2006). *The fifth discipline: The art and practice of the learning organization*. [Kindle Version]. Retrieved from Amazon.com