Project-Based Learning in IT Skill Development

Contents

Universities	Teams	Labs	Goals
RIT	Yes	Yes	
MIT	No	Yes	
Caltech	No	Yes	
	No	Yes	
LU	No	No	

The Problem

Most IT courses are taught from the books and not taught in a way for students to identify the problem, to collaborate, to design/develop a prototype, and to get feedback.

The Solution

To have students and professors use the pedagogical approach as in interactions between students and professors where professors can have students to define the problem, generate ideas, prototype solutions, and test to where they can use project-based learning in a classroom setting.

Research Plan

It's a website that will tackle a little bit on how traditional learning with IT Skill Development doesn't engage with every learning style and how Project-Based Learning help focus on kinesthetic (learning by carrying out physical activities), linguistic (learning by speaking), auditory (learning by listening), and visual (learning by seeing).
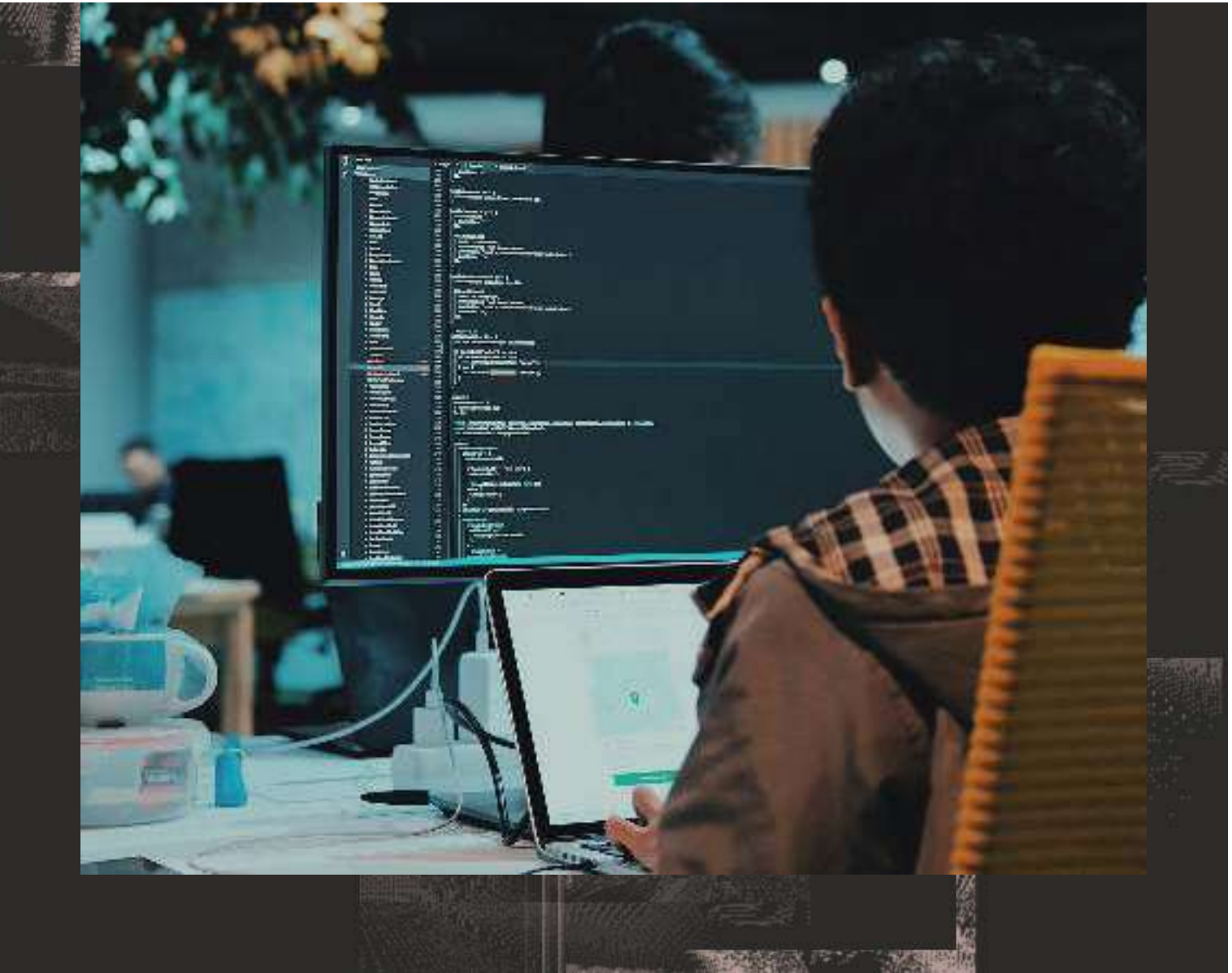
UX INTERVIEW

UX Interview

What are the problems with IT 106?

◉ If students are attempting the
problems in class it's easy to
know who is falling behind and
who is on track

◉ There should also be pairing
with other classmates because
they can benefit by learning
from one another

UX Interview

◉ Students have their own strategy and analogies where they can apply what they learned

◉ Professors can give quizzes and projects after students work together

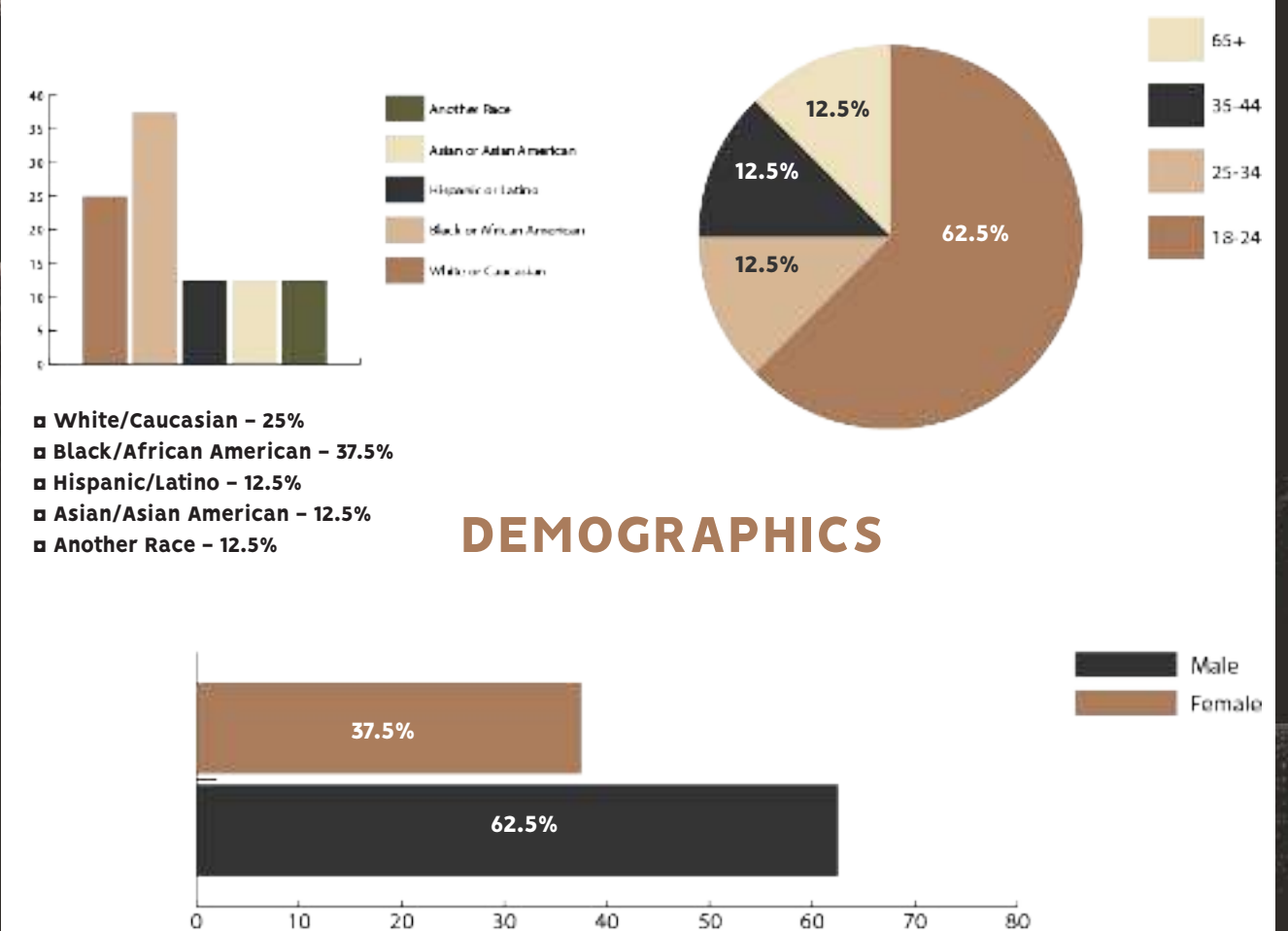◉ College should be more of a flow and not a one-size fit all environment

Alex is an Assistant Professor at Marymount University. He is also a professor at George Mason University. Alex is researching in the following areas: cyber threat analysis, cyber-crime, natural language processing, applied machine learning, and deception-detection. His way of teaching encouraged me to declare a minor in graphic design (then I later changed it to web design). I realized that his method of teaching helped me understand the fundamentals of web design. I've known Alex for a couple of years. He was my lab professor at the Volgenau School of Engineering here at Mason for Multimedia and Web Design.

Alex Mbaziira
Married
Assistant Professor at Marymount University
Fairfax, VA

Goals
▫ Upbeat Hard Worker
▫ Career Driven
▫ Likes to see students succeed
▫ Encourager
▫ Motivator

Frustrations
▫ Student Stress
▫ High fail rate in the IT department
▫ One-size fits all

THE SURVEY

White/Caucasian – 25%
Black/African American – 37.5%
Hispanic/Latino – 12.5%
Asian/Asian American – 12.5%
Another Race – 12.5%

DEMOGRAPHICS
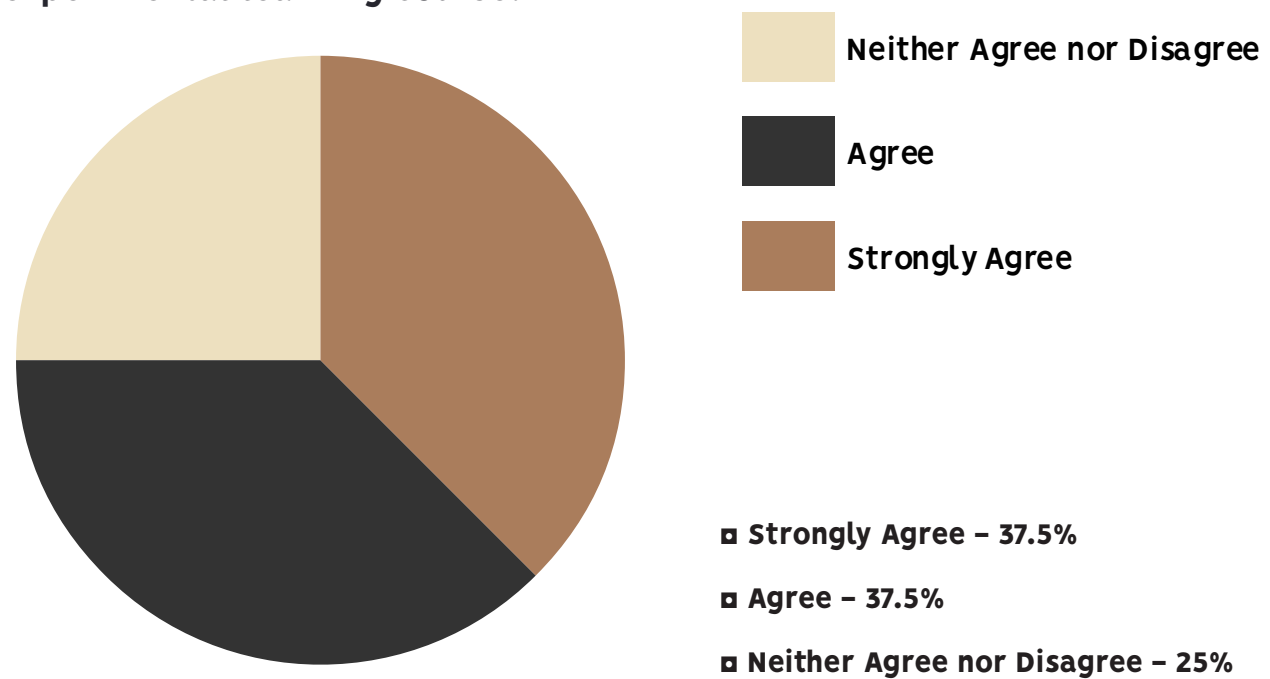
Should IT 106 (Introduction to IT Problem Solving Using Computer Programming – Java Version) be an experimental learning course?
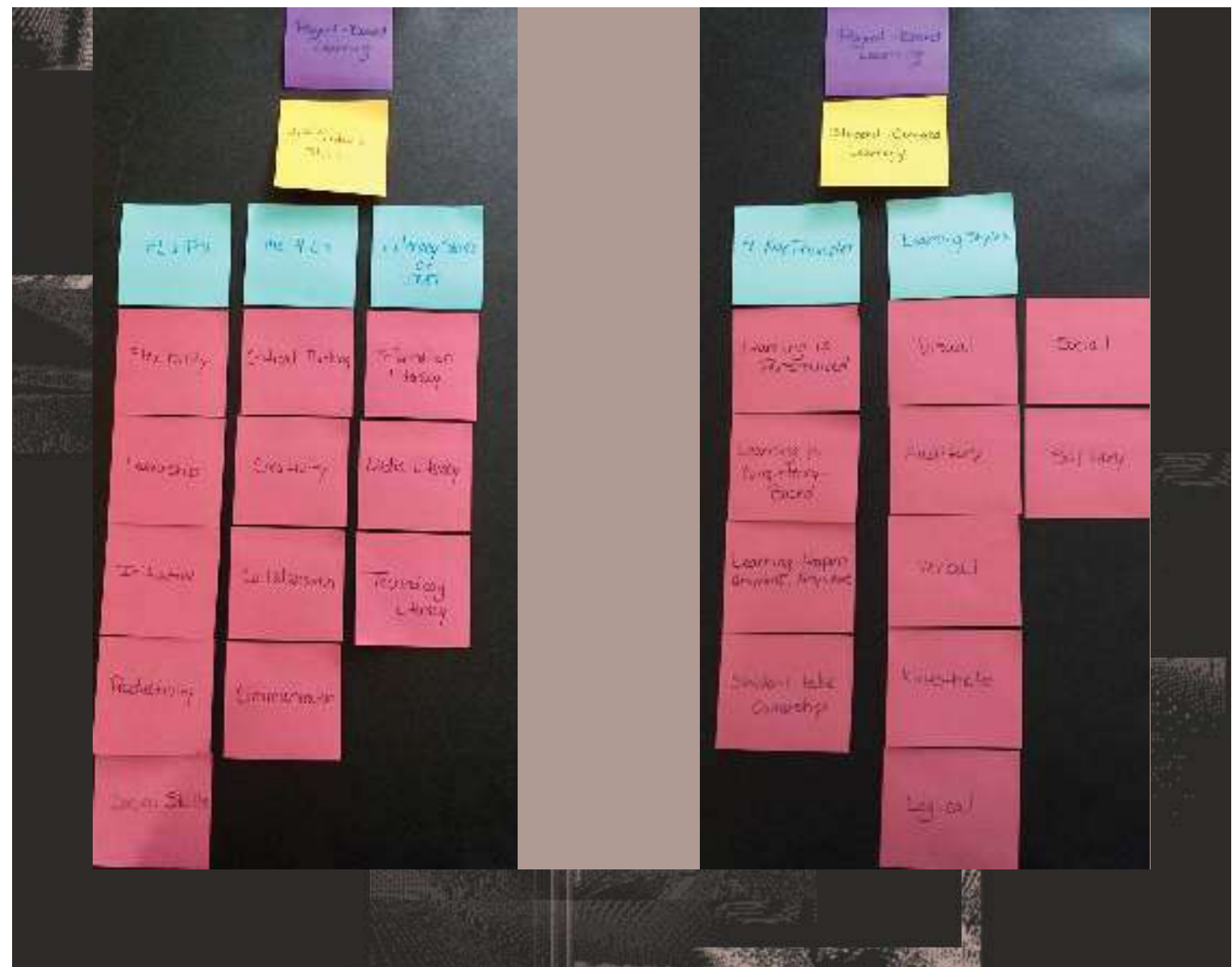

Neither Agree nor Disagree

Agree

Strongly Agree

▫ Strongly Agree – 37.5%
▫ Agree – 37.5%
▫ Neither Agree nor Disagree – 25%

Do you think you would gain more from an experimental learning or traditional course in IT 106? If so, state your reason.

Experimental Learning

Traditional Learning

▫ Experimental Learning – 71.43%
▫ Traditional Learning – 28.57%
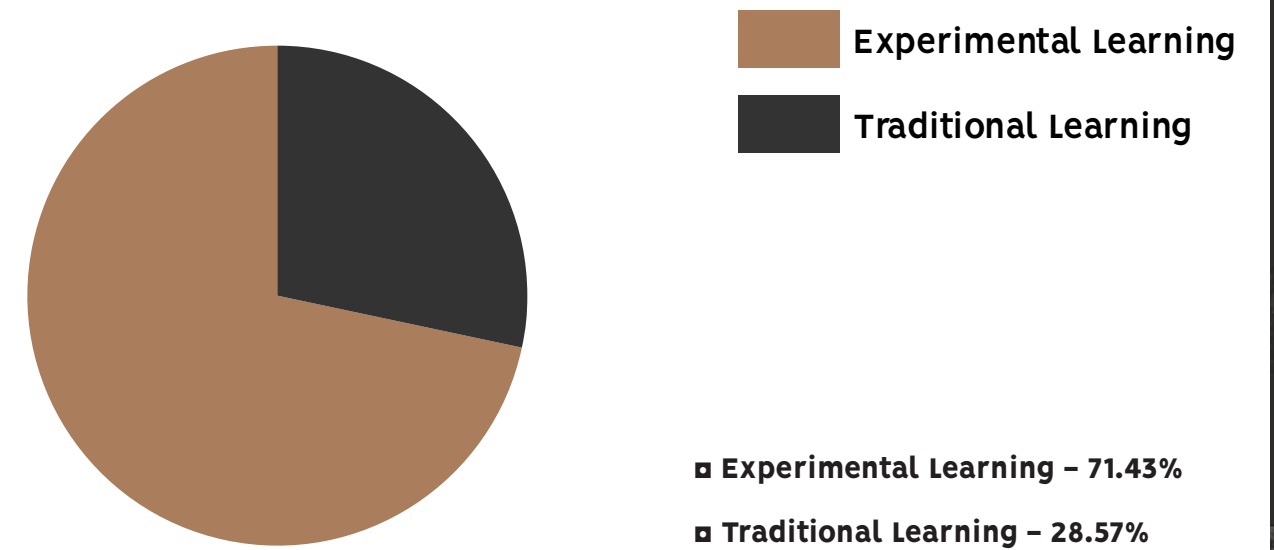
AFFINITY DIAGRAM

Affinity Diagram
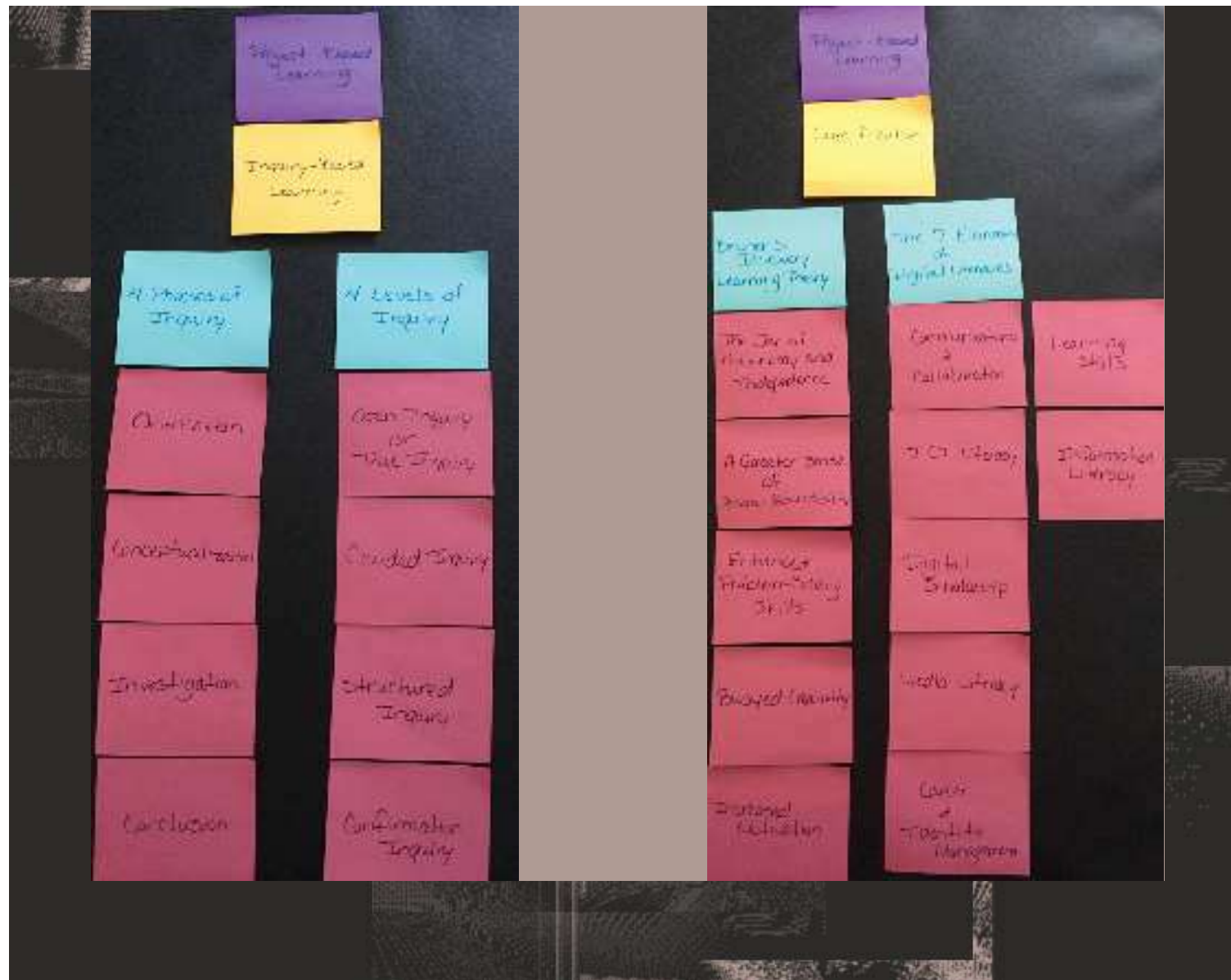
COMPETITIVE ANALYSIS

Competitive Analysis

Universities	Teams	Labs	Goals
RIT	Yes	Yes	To introduce students to Engineering Problem Solving (EPS)
MIT	No	Yes	To teach students the basics of Java Programming
Caltech	No	Yes	To show the fundamentals of Java Programming
R	No	Yes	This course prepares students to program stand-alone applications
LU	No	No	Introduces students to software testing

CONTENT STRATEGY

Content Strategy

My target audience are professors and students. I am trying to engage to professors as to why project-based learning is more beneficial to students who are struggling the traditional way with some of the IT courses at George Mason University.
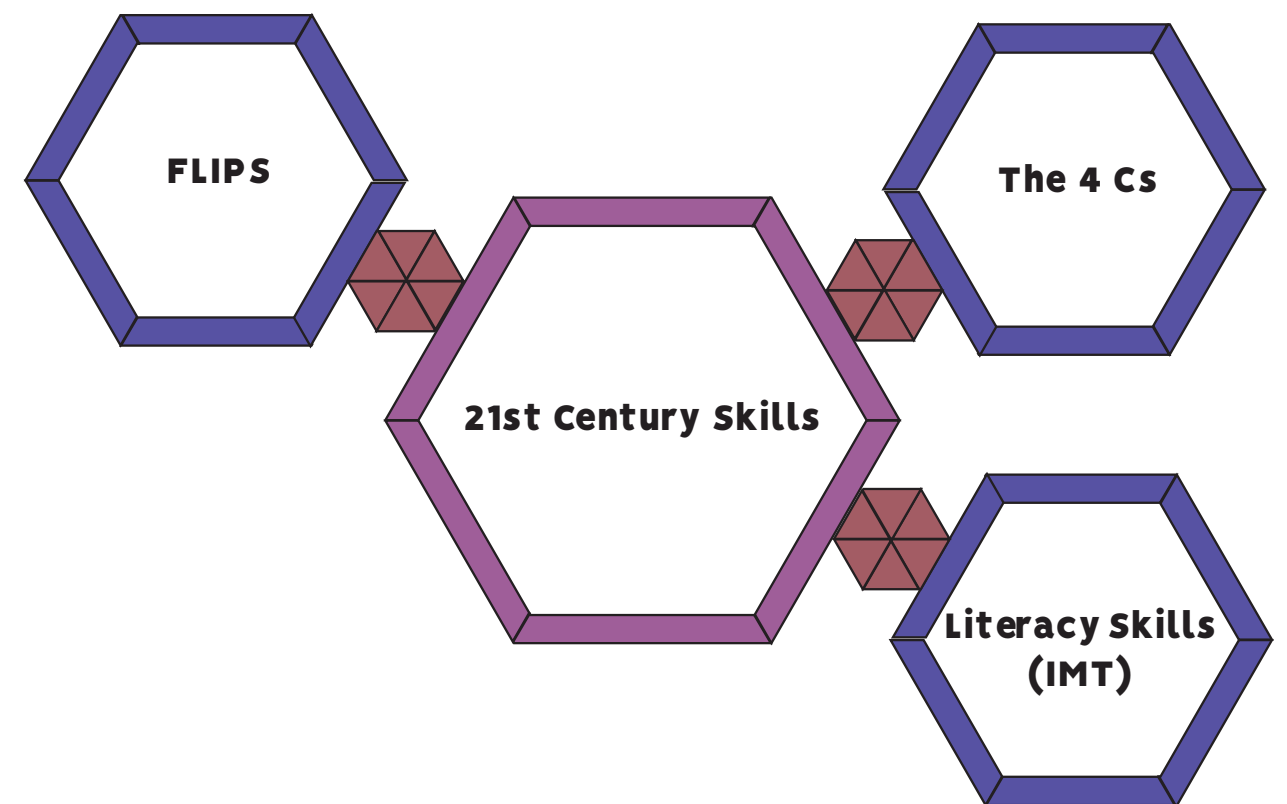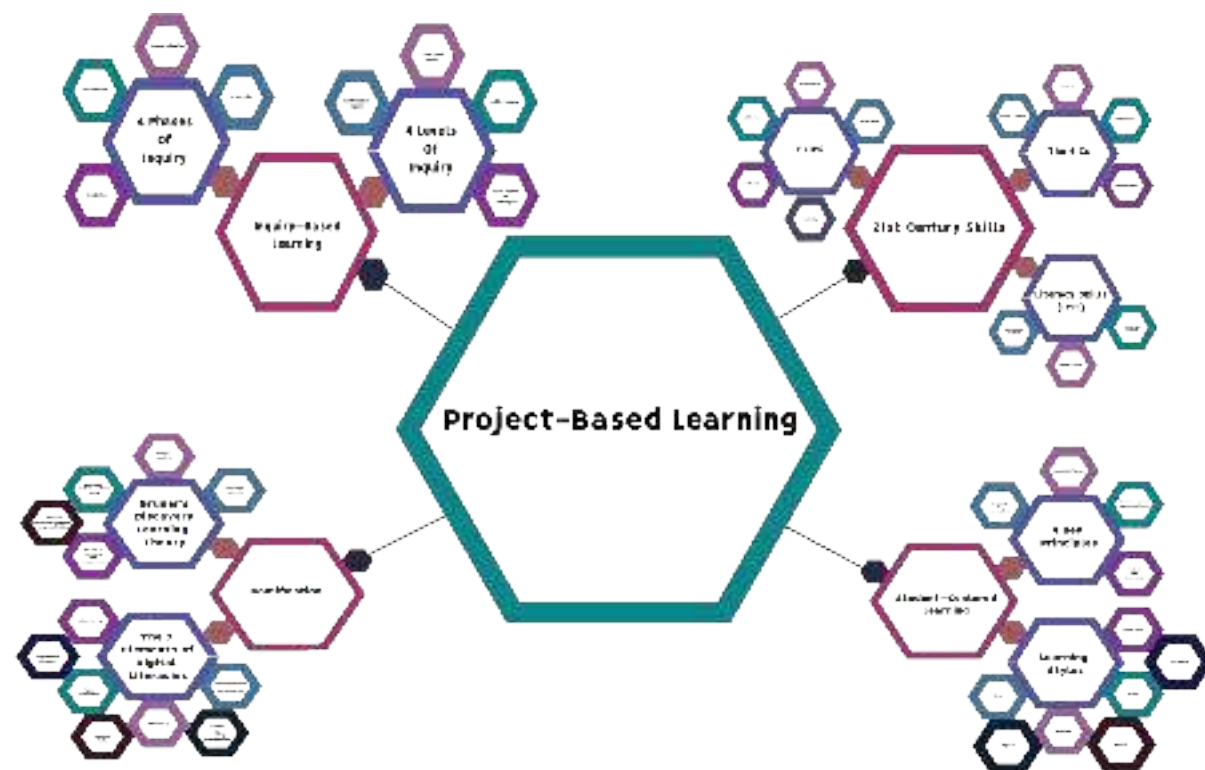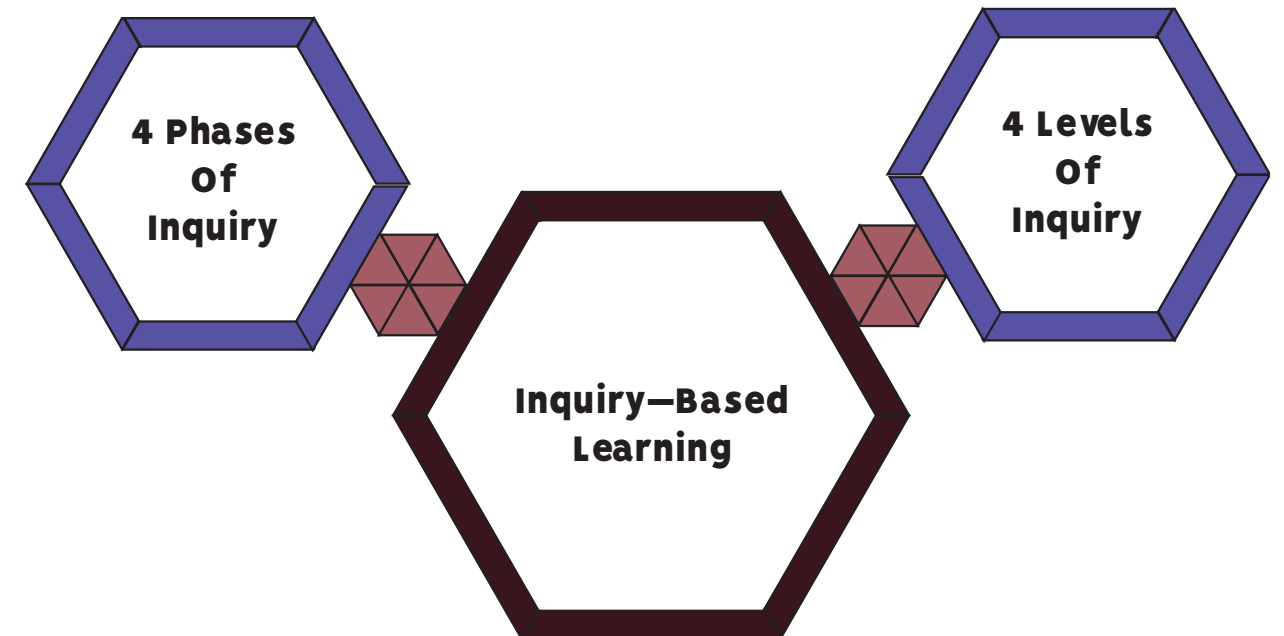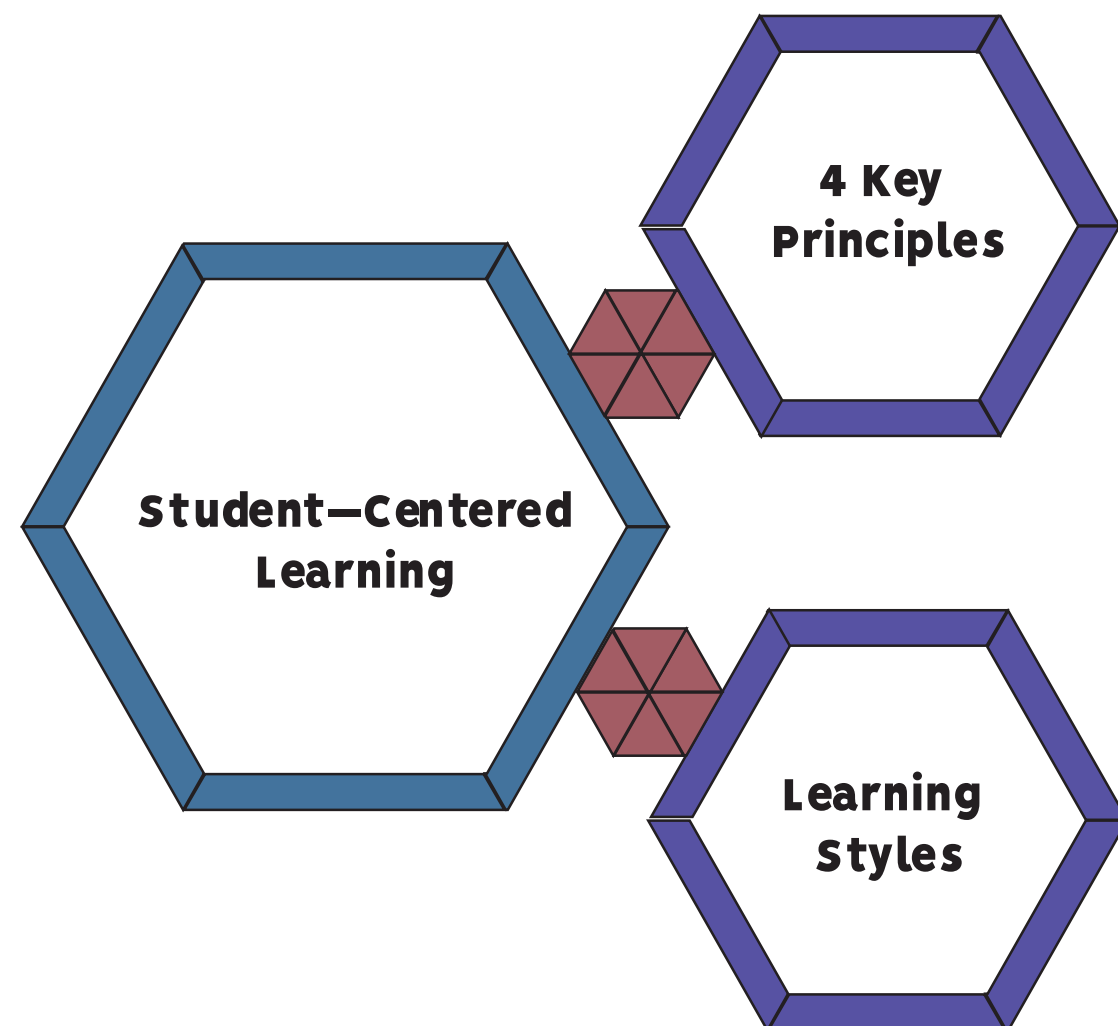
TASK ANALYSIS
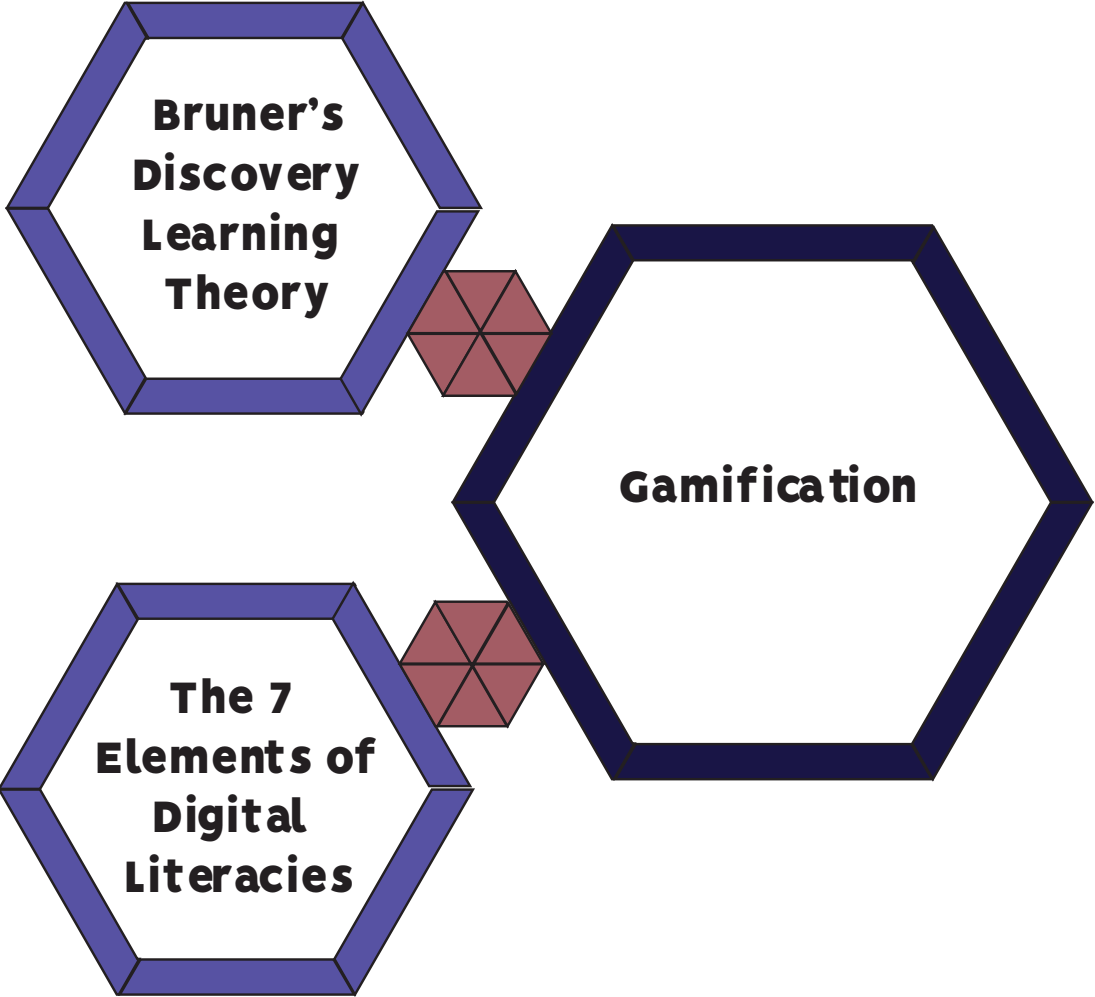
Task Analysis

INFOGRAPHIC

Infographic

21st Century Skills

4 Key Principles

Student-Centered Learning

Learning Styles

4 Phases Of Inquiry

Inquiry-Based Learning

4 Levels Of Inquiry

Gamification

Bruner's Discovery Learning Theory
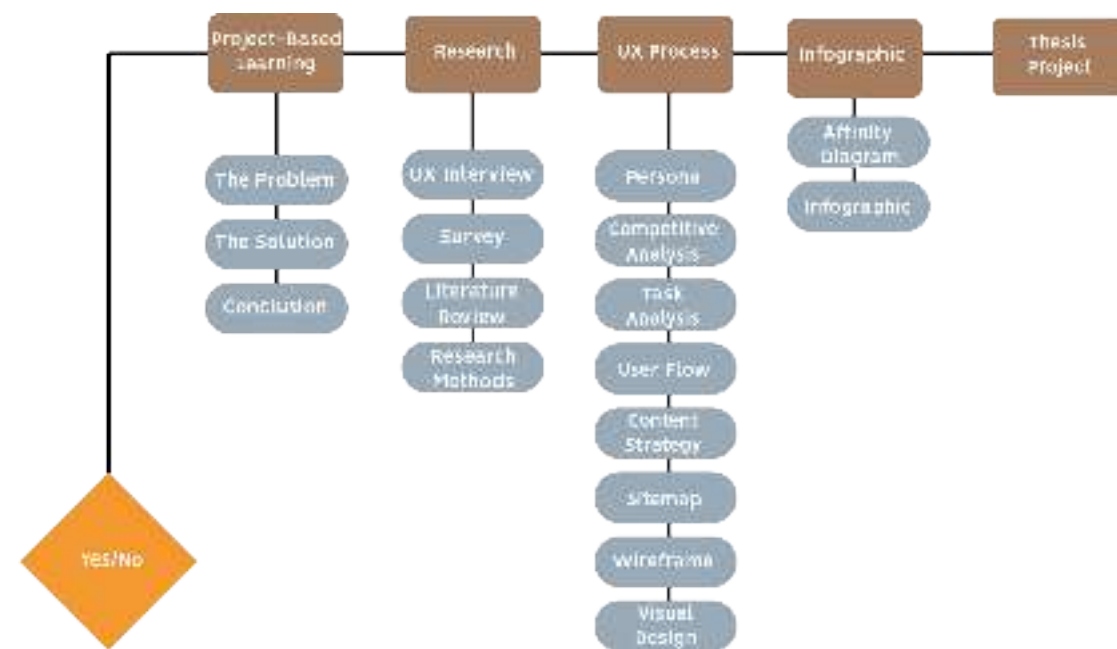
Gamification

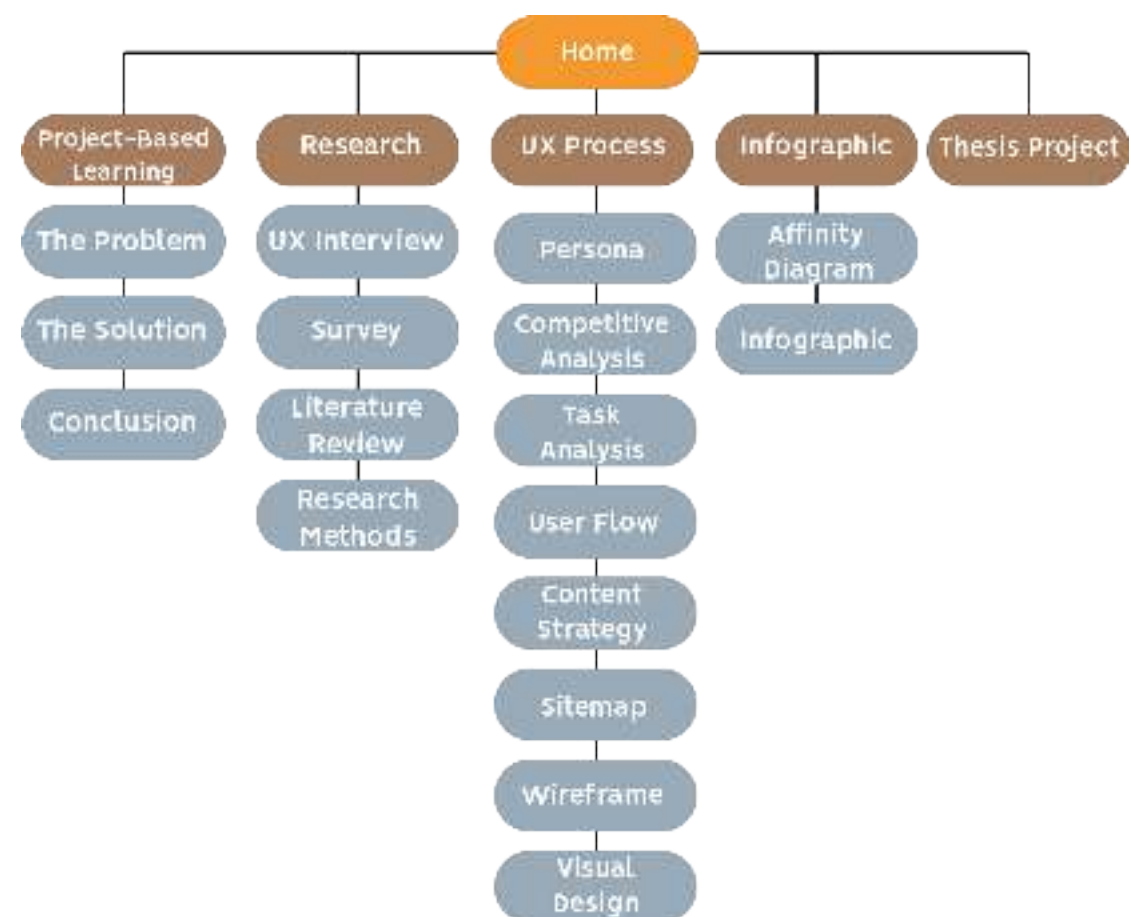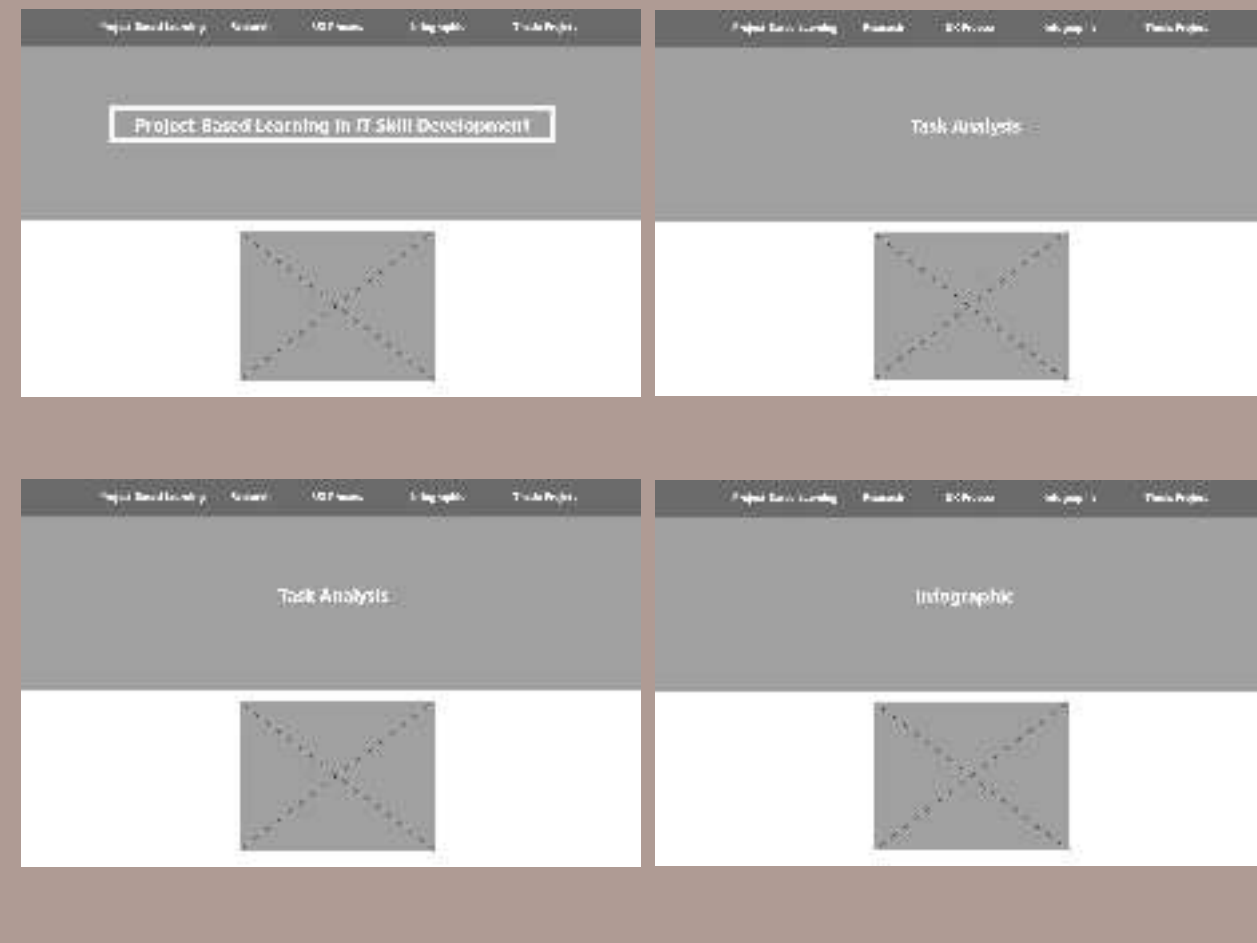The 7 Elements of Digital Literacies

USER FLOW

User Flow

SITEMAP

Sitemap

LOW-FIDELITY WIREFRAME

Low-Fidelity Wireframe

HIGH-FIDELITY WIREFRAME

High-Fidelity Wireframe
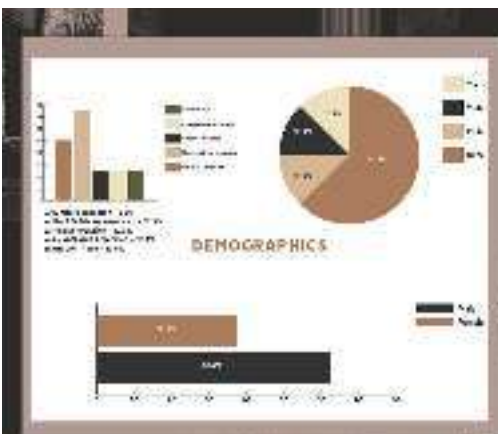

VISUAL DESIGN

Visual Design

Conclusion

Schools are moving towards Project-Based Learning. Developers really need to work in teams to learn how to use each other skills to create a project.

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