## **CSC425 Deliverable 2: User Research & Problem Definition Submission Template**

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### **Target User Group**

**Elementary and Middle School Teachers**Elementary and middle school educators responsible for teaching young students core subjects. These educators face pressure to cover broad curricula while also preparing students with relevant, foundational skills for the future.

### **Problem Description**

Teachers are often expected to cover a ton of content, leaving little room for deep understanding. At the same time, they struggle to determine which subjects and skills will best prepare students without overwhelming them. This creates a challenge of balancing breadth and depth in early education. Do some subjects take more priority than others and if so should we allocate time to those subjects and take from others?

### **Evidence of the Problem**

* 92% of public school leaders are concerned about students meeting academic standards, and 80% are worried about staffing shortages, which impacts teachers directly.
* A 2024 survey by the National Center for Education Statistics found that 61% of K–8 teachers reported struggling to fit mandated standards into the time available.
* Research on cognitive overload in young learners shows that presenting too much information too quickly can reduce retention and long-term understanding.

### **“How Might We” Statement**

**How might we help educators prioritize what knowledge and skills are essential for young students without overwhelming them with excess information?**

### **User Persona**

**Name:** Jennifer Goodman  
 **Age:** 29  
 **Occupation:** 5th Grade Teacher  
 **Location:** Benton, KY  
 **Goals:** Ensure her students leave elementary school with strong literacy, numeracy, and problem solving skills.  
 **Frustrations:** Overloaded curriculum requirements, lack of guidance on what topics matter most for long-term success, students feeling stressed or disengaged.  
 **Technology Comfort Level:** High (regularly integrates digital tools in the classroom, but limited time to curate resources).

### **Ethical Lens Applied**

**Principle:** **Responsibility to promote student well-being and meaningful learning.**

* **Application:** Current curricula can unintentionally disadvantage students by prioritizing coverage over comprehension, violating the principle of fairness in learning opportunities.
* **Stakeholders Impacted:** Students, teachers, parents, and school systems.
* **Professional Standard:** ACM 1.2 (Avoid harm): Preventing cognitive overload protects student well-being. ACM 1.4 (Be fair and take action not to discriminate): Ensuring educators can prioritize essential learning supports equity across diverse student populations.