Assignment 6: Literature Review on Educational Theory in Software Engineering

There are two main learning outcomes that this assignment is reinforcing. The first is to develop your understanding of educational theory by informing yourselves through peer-reviewed literature. The second is to challenge your skills at analysing this literature and demonstrating this understanding by synthesising different concepts.

This is a **group project**. Please check Canvas for your project groups. If you have not already established a platform for discussion, you should do this as soon as possible.

I recommend using LaTeX for this, and Overleaf is a great tool for collaboration.

Details

Your literature review should be a synthesis of educational literature in the Software Engineering (SE) and Computer Science (CS) domain. This may be the strategies that are used to teach SE/CS concepts, or it may be tools developed using SE/CS skills to teach concepts within or outside of the domain. Note that this can give you a broad scope, it will be important to limit this scope. That will allow you to stay focused and give enough detail in your review, managing depth and breadth of research is an important skill.

A typical approach for this would be to introduce and define an educational concept with supporting literature. Then, examine different uses of this theory in the SE/CS domain. Find commonality between the uses, then share an understanding of why this may be the case. Identifying the strengths and weaknesses of the theory/method/practice should help you to do this.

If your group has decided on a direction for your development project already, then you may want to cater your research towards your idea. For example, you may have chosen to implement a language learning tool — your literature review could have a focus on existing language learning software and the educational theory that this has been supported with.

Requirements

1. There is not a page limit, but I would expect the document would be approximately 5 pages in length (excluding references). There are no reference limits, but I would expect it would be difficult to have a thorough review without at least 40 sources.
2. The document will use the IEEE conference template, A4 page format, double column, 10pt font using the conference style.
3. You will not need an abstract/authors/introduction/conclusion etc. Just headings to separate concepts as required. A simple title, e.g., Assignment 6 – Group X is fine.

Tasks

1. Complete a literature search of how educational theory is used in Software Engineering or Computer Science contexts.
2. Write a literature review synthesising the literature you have discovered in your search.
3. A secondary document describing your individual contribution (e.g. a subsection or highlighted portion of your work or written description of how you contributed).

Submission

You will submit Assignment 6 through Canvas. A member of your group should submit the completed literature review to the 'A6: Literature Review' group assignment. **Remember to double check that this has been submitted.**

All members of your group should submit their secondary document describing their individual contribution to the 'A6: Literature Review (Individual Contribution)' assignment.

Assessment Rubric

Task	Description	Marks
Introduce educational concepts	Introduce educational concepts (theories, practices, methods) that are used in SE/CS contexts with supporting definitions and references.	5
Identify uses of concepts	Identify how these concepts are used in SE/CS with supporting definitions and references.	10
Synthesise uses of concepts	Synthesise the different uses of concepts by referencing examples of how they are used, analysing the commonalities and differences between them and how this relates to the strengths or weakness of the concept.	25
Scoping	Managing the scope of the literature review by balancing the depth that each topic is discussed with the breadth of topics discussed.	5
Cohesion	Ensure that your literature review is cohesive, that sentences and topics relate to each other.	5
Prose	There is an expectation that prose will be easily understood by the reader. Prose that is difficult to read or follow will result in reduced marks.	-
		Total: 50