



Introduction to Learning and Engagement Strategies (LESSs)

Peter J. Clarke and Yujian Fu

LESSEP19-1 @ FIU 2019

6/7/2019

Outline

- Think-Group-Share
- Overview of LESs
- LES Integration Model (LESIM)
- Summary

Think-Group-Share

- Individuals in team THINK about the question.
- GROUP discusses possible answers to the question, and decide on the best answer.
- Team representative SHAREs answers with the class (workshop attendees). Sharing will be done in a round robin manner between teams and the team representative rotates with each presentation
- Individuals in team make notes to help with their specific implementation plan

Variant of Think-Pair-Share [1]

Think-Group-Share Exercise

What are common student learning problems in your courses?

<https://forms.gle/JPkwZJSqStjsh2YV9>

Overview of LESs

- Learning and engagement strategies (LESs) are grounded in active learning.
- Active learning is “a method of learning in which students are actively or experientially involved in the learning process and where there are different levels of active learning, depending on student involvement.” [2]

Overview of LESs cont

- In our context LESs are limited to: *collaborative learning, gamification, problem-based learning, and social interaction*.
- We attempt to relate LES to Cognitive Load Theory [3].
- There are three main types of cognitive load
 - Intrinsic – inherent level of difficulty associated with a specific instructional topic (*mange it*)
 - Extraneous – generated by the way information is presented to the learner (*reduce it*)
 - Germane – the processing, construction and automation of schemas (*increase it*)

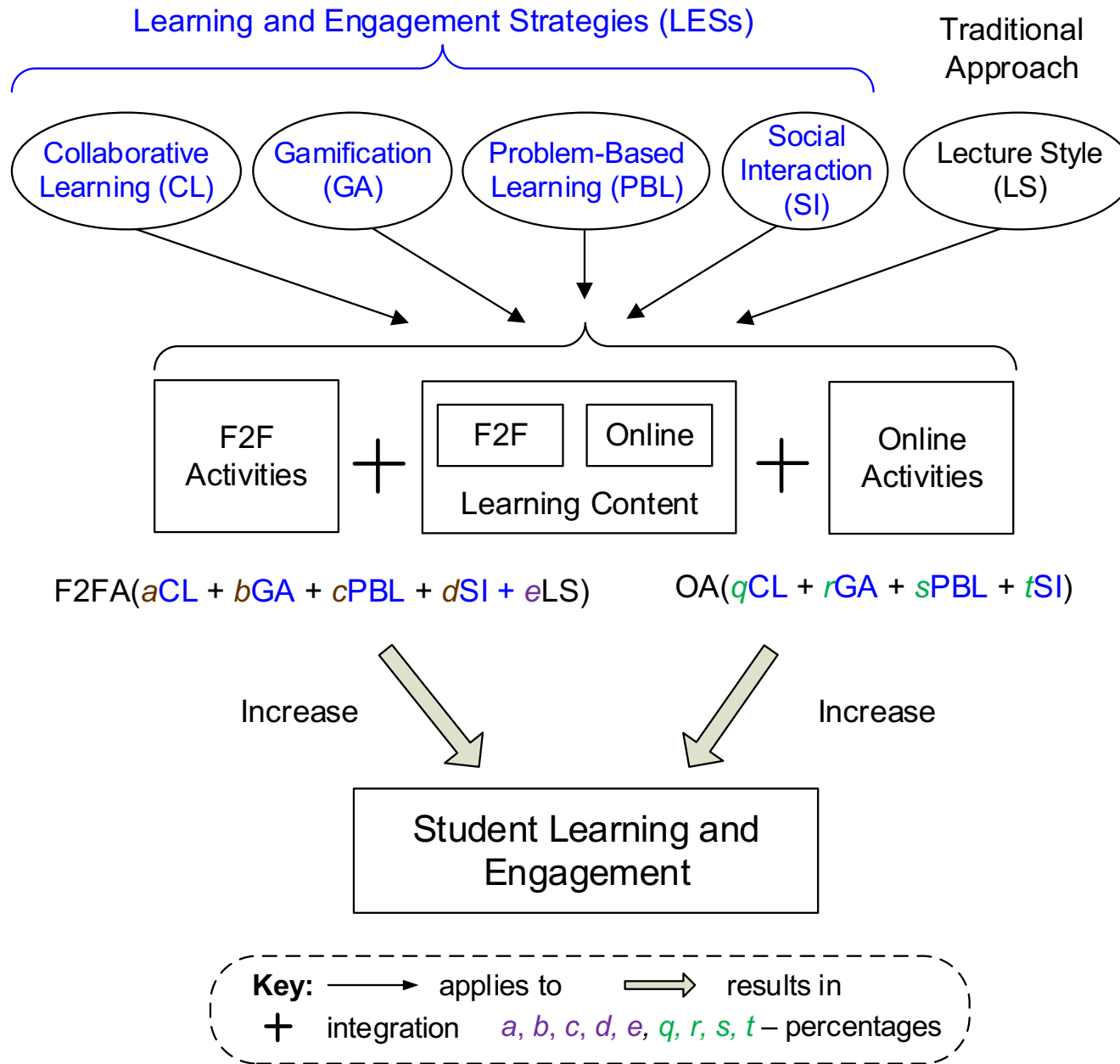
Learning and Engagement Strategies (LESs)

- *Collaborative learning* is where two or more people work in groups mutually searching for understanding, solutions, or meanings, or creating a product [4].
- *Gamification* uses game design elements and game mechanics to improve user experience and engagement with a system, which can be applied to an educational context [5].

Learning and Engagement Strategies (LESs) cont

- *Problem-based learning (PBL)* is an approach to learning and instruction in which students tackle problems in small groups under the supervision of a tutor [6].
- *Social Interaction* is an approach that enhances knowledge acquisition through social activities, such as students establishing meaningful dialogue within student groups and with teachers [7].

LES Integration Model (LESIM)



Goal of Using LESIM

The main objective of the proposed model is through research find the values of a , b , c , d , e , q , r , s , and t in the equations:

$F2FA (aCL + bGA + cPBL + dSI + eLS)$, and

$OA(qCL + rGA + sPBL + tSI)$

that maximizes student learning and engagement. Where $F2FA$ and OA are the face-to-face and online activities respectively

The values a , b , c , d , e , q , r , s , and t may represent class time spent using LES.

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Summary

- Introduced *Think-Group-Share* cooperative learning style
- Briefly introduced LESs: collaborative learning, gamification, problem-based learning, social interaction
- Introduced LES Integration Model

Leila Zahedi
lzahedi@fiu.edu