Towards the design of learning scenarios combining activities across multiple spaces

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New technologies, new opportunities for collaboration across multiple spaces….

… interconnected spaces….

… conditioning interactions among students….

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If space matters….

Can we help teachers/designers/practitioners to define the characteristics of the spatial locations intervening in their learning activities and the technology that link them?
Space in the design process

**4SPPlces Model**

*what* learners and teachers should perform

- Learning flow
- Activity
- Group characteristics
- Data flow

*who* participate in the learning activity

- Number Participants
- Profile
- Location

*where* the activity takes place

- Virtual & physical spaces
  - Areas
  - Components (Arrangement, Affordance, Mobility)

*what is likely to be varied during the activity enactment* that requires a flexible management

- Events on Pedagogical Method
- Events on Participants
- Events on Space

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Space in the design process

*ISiS Model*

- **Who?**
- **Who?**
- **Resources given?**
- **For whom?**
- **What?**
- **Which tools?**
- **Where?**
- **Locations defined in the Situational Context**
### 4SPPICES & ISI S

**Comparing how both models face the space definition**

<table>
<thead>
<tr>
<th>4SPPICES</th>
<th>ISI S</th>
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<tbody>
<tr>
<td><strong>Participants</strong></td>
<td><strong>Roles</strong>: defines the type and number of actors (small groups, individual, whole class...) to be involved in the activity.</td>
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<td><strong>Participants</strong>: specifies the potential number of people to be involved in the activity and the actual number finally participating, their profile and their spatial location in each activity.</td>
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<td><strong>Space</strong></td>
<td><strong>Situational context</strong>: defines the abstract context used to perform the interactional situation: <strong>Roles, Resources, Tools, and Locations.</strong></td>
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<td><strong>Virtual Space</strong></td>
<td><strong>Resources, Tools</strong> manipulated during the activities performed for each interactional situation.</td>
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<td><strong>Physical Space</strong></td>
<td><strong>Locations</strong> where activities can take place and can be precise classrooms or other external places (home, outside, enterprise, internet connected location...).</td>
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<td><strong>Virtual spaces</strong>: where participants manipulate virtual elements not necessarily located at the same place.</td>
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<td><strong>Physical spaces</strong>: where the participants directly manipulate the elements of the space. Defined by areas and components with a particular <em>affordance, arrangement</em> and <em>mobility</em> properties.</td>
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Discussion

4SPPIces & ISiS are a first approach to make practitioners/designers/developers reflect about new activities involving multiple inter-related spaces

To continue exploring…
- 4SPPIces or ISiS? In which situations?
- Analyze existing experiments of activities linking spaces with the two models.

To reflect about…
- Authoring tools including the design of the space?
- How the linkage between spaces is conditioned by the technologies supporting the different activities?
Thank you!

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