

# APPROACHES FROM THE LITERATURE: Activity Theory, new tools and changing educators' practices

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For a study being undertaken to investigate if and how educator practices change through MOOC development and engagement with open education, Activity Theory provides a heuristic to observe contradictions and changing educator practices after the addition of new tools to a learning environment. Ours is a longitudinal study with cross case analysis of lead educators in 3-4 MOOCs, examining themes and contradictions emerging from the semi-structured data analysis to observe change in practices. In this poster we explore the question: how and why has activity theory been used to examine the introduction of new tools/mediating artefacts into the learning environment. A fuller version of our literature review is available at <http://bit.ly/1jwyit3>; our study's design amalgamates the three approaches below. Our study is conducted by Laura Czerniewicz and the MOOC team at the Centre for Innovation in Learning and Teaching.



## Hardman 2005

This study asks if the introduction of a new tool – the computer – into the classroom shifts a teacher's pedagogical practices. It offers a thick description of the educator's changing activity system after the entry of computers into the learning environment.

### Findings:

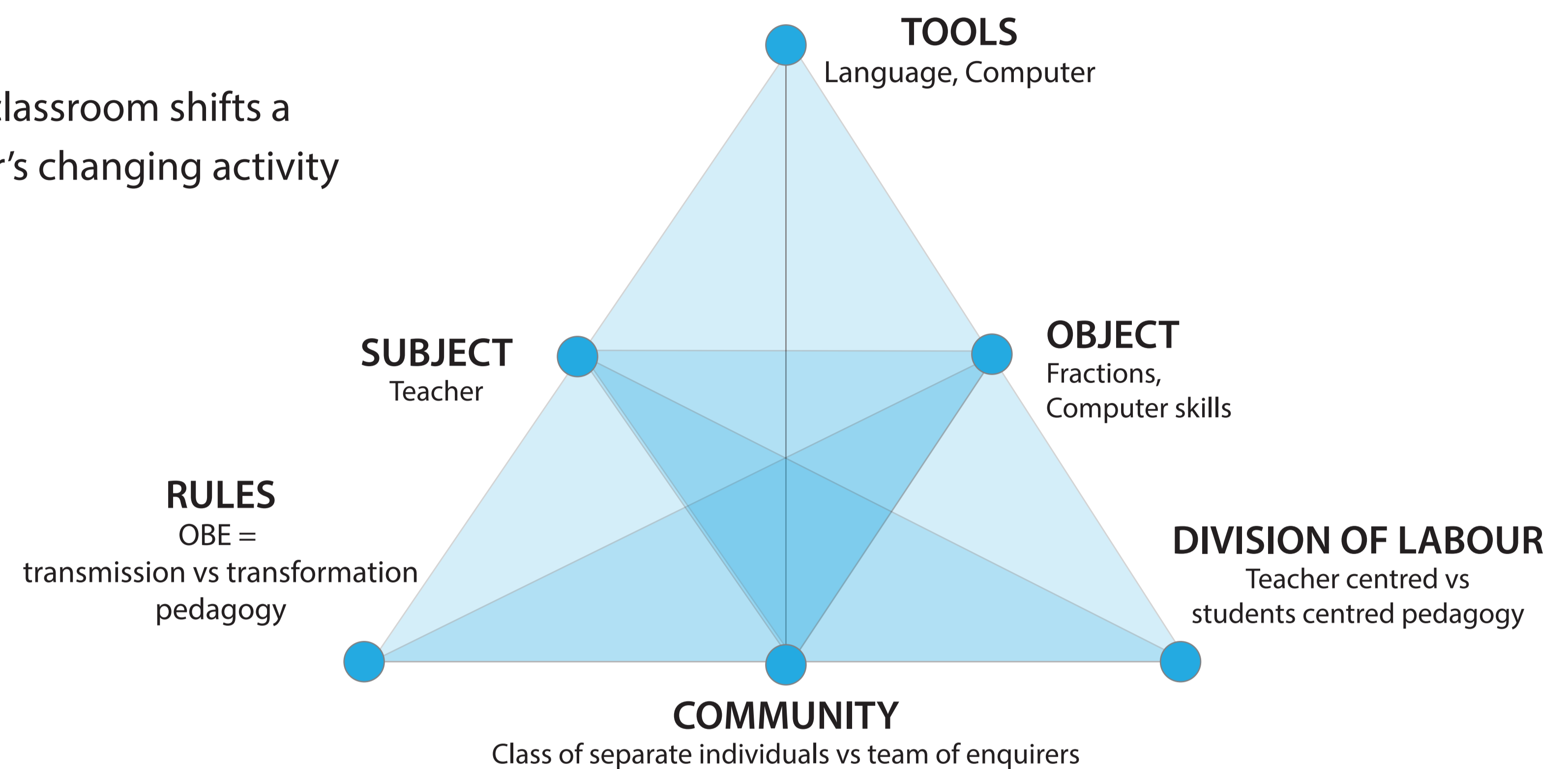
New tools requires new division of labour (computer-competent students help other students)

Shift from teacher-centred to student-centred pedagogy

Contradiction between computer as tool for creative student-centred learning and as tool for lower level skills

Contradiction between computer a tool for recall, recording and practice and tool for exploration

Hardman, J. (2005). An exploratory case study of computer use in a primary school mathematics classroom: new technology, new pedagogy?: research: information and communication technologies. *Perspectives in Education: Research on ICTs and Education in South Africa: Special Issue 4*, 23, p1-13.

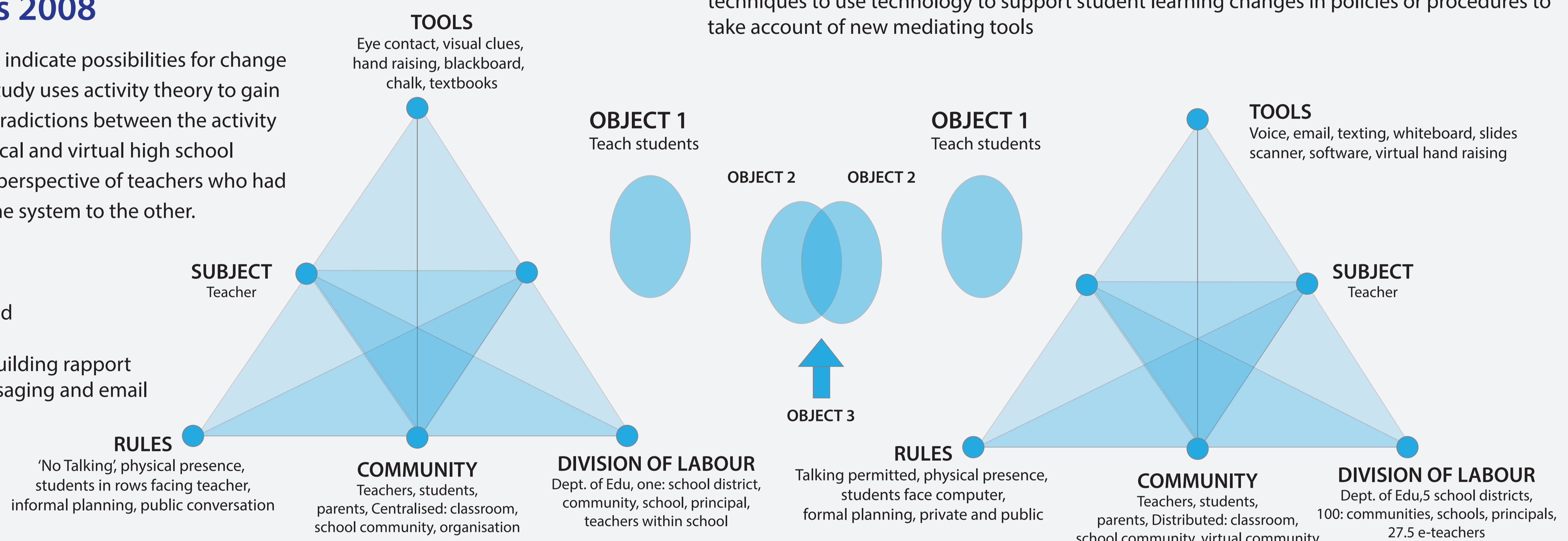


## Murphy and Rodriguez-Manzanares 2008

Since contradictions indicate possibilities for change or innovation, this study uses activity theory to gain insight into the contradictions between the activity systems of the physical and virtual high school classroom from the perspective of teachers who had transitioned from one system to the other.

### Emerging themes:

- Time and workload
- Visual cues
- Interaction and building rapport
- Use of direct messaging and email



Murphy, E., & Manzanares, M. A. R. (2008). Contradictions between the virtual and physical high school classroom: A third-generation Activity Theory perspective. *British Journal of Educational Technology*, 39(6), 1061-1072.

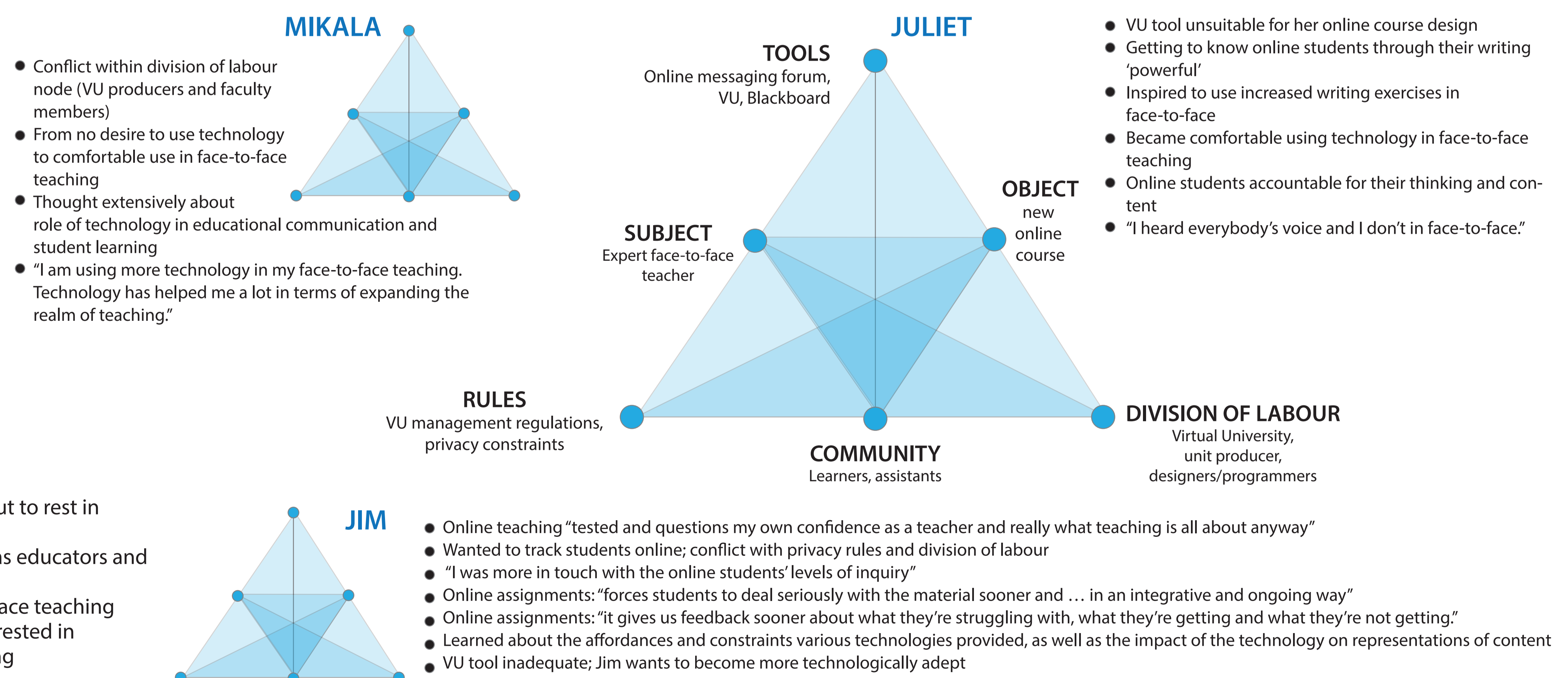
## Peruski and Mishra 2004

By way of cross-case analysis, this study examines three expert face-to-face educators who design and teach their first online course. It aims to see which contradictions emerge when designing and teaching an online course, and asks how participating in these activities transforms the thinking of the educators (or the systems) in terms of teaching, learning, technology, course design, and face-to-face teaching.

### Findings:

Common to all three educators:

- Rethink, re-evaluate teaching issues long put to rest in face-to-face context
- Anxiety about ability; reconsider their role as educators and what they want to achieve
- Transformations in thinking about face-to-face teaching
- Gained knowledge on technology and interested in incorporating tech into face-to-face teaching



Peruski, L., & Mishra, P. (2004). Webs of Activity in Online Course Design and Teaching. *ALT-J: Research in Learning Technology*, 12(1), 37-49.

## Conclusion

This poster has examined three studies which use activity theory to examine change in educators' practices after the introduction of a new tool/mediating artefact into the learning environment. Our study incorporates these three studies into the design of our study of change in educators' practices.

Link to Zotero public bibliography: <http://bit.ly/1PBkpWA>

Link to broader literature review: <http://bit.ly/1jwyit3>

Link to broader project: <http://bit.ly/1Nty2rd>

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