Social Media, Flipped Learning & MOOCs – What do these recent trends tell us about the state of technology adoption in higher education?

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Background

• **Aim:** Identify what recent technological innovations (social media, flipped learning, MOOCs) are trending towards in higher education for optimized implementation in the local context

• **Approach:** To review literature and identify research-based evidence
Methodology

• Searched peer-reviewed academic articles published from Jan 2005 to Dec 2015
• “flipped learning” OR “Social media” OR “MOOCs” AND “higher education”
• Academic Search Premier, ERIC, PsyARTICLES, PsyCRITIQUES, PsyINFO & Web of Science
• Focused on articles that has “teaching and learning” as the context of study
Findings

• 20 studies explicitly reported empirical data
  – Social media (45%)
  – MOOCs (30%)
  – Flipped learning (25%)

• 18 conceptual discussions
  – Disruptions or disturbances (Fischer 2014; Langen & van den Bosch, 2013)
  – Design standpoints e.g. SPOCs (Fox 2013; Tay & Allen 2011)
  – Business models (Kalman 2014; Bose 2014)
Findings – Social Media

- Range of Undergraduate & Masters level courses
- Predominance of *social networking* & *tweeting* among many other tools
  - Studies lean towards the efficacy of tools to build/enhance learning community
  - Most studies reported (a) increase interaction around course-related activities (Evans, 2014), (b) positive feedback on the use of tools (Cartledge, Miller & Philips 2013)
  - Challenges (a) extensive collaborative learning not fully exploited (Hassan & Adel, 2014), (b) uncertainty over what counts as knowledge (Hung & Yuen, 2010)
Findings – Social Media

- Other studies focused on broad range of tools
  - Youtube videos to augment classroom/online learning (Buzzetto-More, 2014)
  - Google docs to promote active learning (George, Dreibelbis & Aumiller, 2013)
  - Pinterest to enhance real-world learning (Lapolla 2014)
  - Mix of social media to promote self-directed learning (Valjataga & Fiedler, 2009)
Findings - MOOCs

• Majority of papers in recent 2-3 years
• Promise of MOOCs remains at being able to attract crowds at the onset with the promise of access to high quality materials and/or interacting with renowned faculty
• Studies focused on courses with popular content pitched at foundational year
• Types of studies:
  – Studies that explore nature of interaction within cMOOCs (Andersen & Ponti, 2014)
  – Studies that explore MOOCs as a business model, i.e. knowledge & skills upgrading of prospective pre-U students (Daza, Makriyannis, & Riera, 2013)
  – Studies that explore instructional design strategies to increase retention & engagement rate (Freitas, Morgan & Gibson, 2015)
Findings – Flipped Learning

• Majority of papers in recent 2-3 years

• Types of studies:
  – Many in areas of Math (Love, Hodge, Grandgenett & Swift, 2014) and Chemistry (Fautch, 2015; Weaver & Sturtevant, 2015)
  – Studies that explore motivation (van Vliet, Winnips & Brouwer, 2015) and creative thinking (Al-Zahrani, 2015)
Findings – Flipped Learning

• Flipped format – (a) Videos are mostly instructor-made either in the whiteboard style or Powerpoint slides with audio narration, and (b) readiness quizzes and forums

• Most studies employ quasi-experiment method and reported positive gains in exams results. Other reported gains include increased ownership

• Challenges – Students reported the need for study skills and more reading required to understand pre-class materials (Weaver & Sturtevant, 2015; Al-Zahrani, 2015)
Summary

• Views of technological innovations still emerging, & still polarized
• More about content and curriculum than meaning-making and to some extent, dispositions required by industries
Implications for Research

Students
• Develop skills for online learning e.g. self-directed learning, digital curation
• Develop skills to mediate the social, e.g. CSCL/KC
• Extend embodiment in online settings – e.g. adaptive expertise, ‘learning-to-be’, dispositions valued in the workplace, 1:1 tutoring?

Data-related
• Learners’ use & Faculty’s use e.g. dashboards, alerts, adaptive systems, personalized pathways, and even meaning-making
Implications for Research

Business models

• New market segments, micro degrees, ‘stackability’, roles played by industry players
Thank You
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