E-learning for global curriculum inquiry: Hong Kong prospective teachers' learning experiences

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Background of study

• E-learning
  – Changing way of how students communicate *acquire knowledge and obtain information* in the process of education (McNaught et al., 2006)

• Teacher education
  – *Pedagogical applications* and uses of e-learning tools in subject teacher training courses in universities (e.g., Johnson & Green, 2007; Shoffner, 2007; Silverman & Clay, 2009; Wachira et al., 2008)
E-learning: Definitions and Meanings

- **Web-based** learning, **online** learning, **distributed** learning, **computer-assisted** instruction, or **Internet-based** learning (Ruiz et al., 2006)
- “the use of **computer network technology**, primarily over an intranet or through the Internet, to deliver information and instruction to individuals.” (Welsh et al., 2003: 246)
- “technology-based learning in which **learning materials** are **delivered electronically** to remote learners via a computer network” (Zhang et al., 2004: 76)
E-learning: Definitions and Meanings

• Constructivist learning approach

  – “learners actively construct meanings by interacting with their environments and by incorporating new information into their existing knowledge and hence building on prior knowledge and skills” (Njenga & Fourie, 2010: 203; Tavangarian et al., 2004).
E-learning: Definitions and Meanings

• Features of e-learning
  – Asynchronous
    • Learning materials can be “pre-recorded” or available to learners at any time of the day, at any locations (Zhang & Nunamaker, 2003)
  – Synchronous
    • Learning occurs in “live” forms where learners have to get access to their computers or other handheld accessories at the same time (Welsh et al., 2003).
Factors affecting e-learning

- Learning context
- Instructor (incl. attitude)
- Learner characteristics (incl. learner computer anxiety)
- Media characteristics (incl. perceived usefulness, perceived ease of use)
- Multimedia instruction (incl. course quality; interactive learning activities; diversity in assessments)
- Technology (incl. system quality)
- University support

(Liaw et al., 2007; Selim, 2007; Sun et al., 2008; Zhang et al., 2004)
E-learning and Teacher Education in Universities

• use of e-learning could bring about positive impacts on prospective teachers’ achievement levels and their attitudes towards e-learning environments. (El-Deghaidy & Nouby, 2008)

• student teachers gained skills and broadened their realization of the potential use of technology in teaching and got more awareness towards social issues (Schrum et al. (2002)

• No significant differences between the online and on-site mode of teacher education programs (Caywood & Duckett, 2003)

• Applying an online discussion forum → student teachers with professional and personal support and foster collegial relationships amongst peers to construct content knowledge about teaching and learning (Assaf, 2005)

• Pre-service teachers preferred asynchronous discussions much more than synchronous discussions but preferences for facilitation by peers and instructors remained the same (Levin et al., 2004)

Unfortunately, limited studies were yet carried out to explore the implementation of e-learning in the field of teacher education involving global partnership for teacher learning.
Research question

• How do prospective teachers perceive and experience the use of online discussion in the course?
Research Methods

- **Settings & Participants**
  - 6 participants (3 M 3 F)
  - Elective teacher education course
    - Principles of Curriculum Design in Semester 2 during 2013-2014
    - About the course:
      - basic concepts about curriculum, learning and teaching, and assessment
      - online discussion with the use of Weebly
        - Group inquiry: curriculum-related topics for collaborative discussion with Spanish prospective teachers + external support from experienced teachers from Canada and Spain → extend discussion
        - Students would present their findings and reflections based on inquiry projects as a summative assessment of the course
Data collection

• Qualitative approach
  – “provide perspective rather than truth, ... rather than generation and verification of universal theories and context-bound explorations rather than generalizations” (Patton, 1990: 491)
  – Most previous e-learning studies took quantitative approach, which was always descriptive in nature. (Shih et al., 2008)
Data collection

• Focus group interview
  – 2 groups (1-hr interview)
  – May 2014
  – A semi-structured interview guide
    • to probe participants’ views and thoughts on their learning experiences of online discussion
Data analysis

• Tape-recorded interviews for transcriptions
• Constant comparative method (Lincoln & Guba, 1985)
• Extensive literature review → coding → categories and themes → similarities or differences within the data
Findings & Discussion

• **Online curriculum inquiry processes**
  – Deep learning
  – New exposure to e-learning
  – Learning without limits
  – Roles: Pre-assigned or disperse?

• **Key factors affecting motivation to online discussion**
  – Easy access to technologies
  – Interaction with peers
  – Choice of topic
Online curriculum inquiry processes

• Deep learning

active to respond to them. I remember one night there was an email saying that there was someone who responded to us, we were so happy. And we discussed more and more, we **got deeper and deeper**. At first it’s quite surface. Afterwards, we were surprised and curious about what they said, **we asked them why and they answered us very deeply**. That makes us ask in a deeper way at the same time.

(Student Y1, PGDE Year 1, 28th May 2014)
Deep learning

As I saw my classmates posted not one or two sentences, that is a big paragraph, I found they were really doing homework, they found information on that, that is really good for the discussion, and we can have a deeper discussion.

(Student K1, PGDE Year 1, 28th May 2014)
Online curriculum inquiry processes

- Asynchronous feature
  - promote deep learning
  - more time to search information + read
  - further discussion of the topics

This forum is not bounded to time and location. That means, discussion is not restricted to be done in the lesson or school, and this is not bounded to meeting the members face-to-face. ... I think this utilization of IT element ... usually our lessons are boring, if group discussion, we discuss, but now this simple online forum contains IT elements, ... if we do discussion during the class, our discussion is just on the surface and restricted to the time limit.

(Student K1, PGDE Year 1, 28th May 2014)
New exposure to e-learning

Actually online discussion or forum is quite similar... what I found **something new and fresh** is ... when doing online discussion in a course, this is **our first time and that’s really special.**

(Student I2, PGDE Year 1, 28th May 2014)

Actually we **all did not try** any online discussion before, especially discussion about Hong Kong education is rare.

(Student Y2, PGDE Year 1, 28th May 2014).
New exposure to e-learning

Formerly we did not try such kind of discussion method. **Now I can consider this teaching tool to help my future lessons.** Now I want to **understand more about how it can be operated.**

(Student Y1, PGDE Year 1, 28th May 2014)

When I **become a teacher in future,** not really that is networking with Spain which is so far from us, **that can be very simple.** When students go home, especially for primary students, it is always difficult for them to sit steadily to do discussion.

(Student Y1, PGDE Year 1, 28th May 2014)
Learning without limits

- Learning anytime, anywhere
- not bounded to the time limit

Actually I am really very happy to know this platform because there is no time limit or region boundary.
(Student Y2, PGDE Year 1, 28th May 2014).

Findings

Usually your ideas will be forgotten. Now you can immediately type in the post. If using this platform you can immediately type in your post. Then your classmates can immediately see that. ... they can share with mum ... and immediately discuss that post. This is really good because there is always time limit during the class. This can be an extension to learning. That is more relaxing. They just regard this as discussion as one kind of learning method. This is what I gained the most.
(Student Y1, PGDE Year 1, 28th May 2014)
They [Students] would talk about something not related during the class, and ... possibly [because] they don’t have much knowledge and can’t talk much. But when they go online at home or their family members talk with them, they can immediately go online to find information and continue discussion.

(Student Y2, PGDE Year 1, 28th May 2014)
Learning without limits

- release stress and get more confidence in expressing one’s ideas and comments

And I think many people are like me who is afraid of saying something wrong, and I am not sure if I am right or not,... not really willing to speak up, or just agree with others. However, this online discussion enables me ... because you can do it at home, you can find more arguments to support your thinking, or find more evidence, then I am more confident.

(Student K2, PGDE Year 1, 28th May 2014)

Similar to other studies indicated that learners could feel free to express their own ideas and less shy to voice out their own opinions (Bender, 2003; Dengler, 2008; Ellis et al., 2006; Gunn et al., 2003; Hew & Cheung, 2003; Kim, 2008; Leonard et al., 2004; Mupinga et al., 2006; Nunamaker et al., 1996)
Learning without limits

- online discussion → encourage more participation in learning
- Learners see their roles as “co-learners” or “facilitators” (Means et al., 2009; Putnam & Borko, 2000)

→ enables and empower the process of learning in a distributed, collaborative way (Dede, 1996; Harris et al., 2013; Kopp et al., 2012)

I think nowadays there are more advanced technologies... I think this [online discussion] makes learning very hands-on. When I was at young age, you could not be so easy to learn after leaving home. Now the source of learning is over here, you use it with smartphone, you can learn at anytime anywhere, and you can discuss with others on the same topic all around the world, you can learn from each other. (Student I1, PGDE Year 1, 28th May 2014)
Learning without limits

- learning can be **globally emerged and collaborative** across different countries

They [Spanish students] were really serious. theirs was very informative. ... at the end that was quite good, we understood what exactly Spanish were doing was quite different. ... for example, in our topic about tutorial class, because attending tutorial classes is very popular, so we would like to know about how Spanish side looks like. Then ... their side has got a problem in language learning as they are Spanish but these few years the demands on teachers’ English standards are getting much higher, they specially have English tutorials. ... That’s really interesting.

(Student K1, PGDE Year 1, 28th May 2014)
Learning without limits

When doing discussion, there are many insights, or seeing more things, and some viewpoints are different, then that actually can exchange different points of view, that's good for my own learning and I can get prepared for my future teaching career as I know more about what other countries are doing in curriculum and this experience makes me know how to use technologies for learning and teaching.

(Student K2, PGDE Year 1, 28th May 2014)
Roles: Pre-assigned? Dispersed?

• emergent, simultaneous

Actually we did not specifically distribute our roles. We only discussed what we could discuss around the central topic, or I myself did some information search. I read something about the topic. Then I would share with my members. Or after Spanish posted something, we immediately responded to them. .. We regularly checked the discussion.... we had a Whatsapp group. When there’s a post from Spanish, we immediately talked about that in our chat group.

(Student K1, PGDE Year 1, 28th May 2014)
**Roles: Pre-assigned? Dispersed?**

- Unassigned roles in discussion
- Curiosity $\rightarrow$ strong motivation

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*I did not think there was any special role during discussion. ... I just was thinking about how to start the first post online... I remember I had been thinking about what can be posted for the first discussion for a long time. And I think about how to answer. Regarding specific role, I did not think we allocated ourselves to any specific role.*

*(Student I2, PGDE Year 1, 28th May 2014)*
Factors affecting motivation to online discussion

• Easy access to technologies
  – convenient to use Apps

That’s something good as there’s an App [Weebly] for this online discussion. Now we all have smartphones, after downloading this App, when someone leaves a post, there’s an email notification to you. You can immediately read that, that’s very convenient... as I live quite far away, sometimes I would read those posts in other groups, when seeing something interesting, I also left posts there. When seeing something interesting, I would post there.

(Students Y2, PGDE Year 1, 28th May 2014)

With this app, I think that’s quite good as it’s more convenient and I don’t need to login on the PC. Just do it on the phone, and this makes me feel more interested in using this.

(Student Y1, PGDE Year 1, 28th May 2014)
Interaction with peers

• Attractive topic
• Responsive to dialogues → satisfaction!

I think there should be recognition. We six people think about this topic... after some time, we discovered some people left us some postings, and we realized what we thought about was constructive, that was still meaningful. Then of course we would be more involved in responding to them. This is the greatest motive indeed.

(Student Y1, PGDE Year 1, 28th May 2014)
Interaction with peers

- Quality of interaction

I think Spanish students are really very serious in participating in the discussion. This really motivates us much more. This encourages us to think and respond to them as they are so devoted and responded to us, we also had to be whole-hearted and continue discussion together.

(Student K1, PGDE Year 1, 28th May 2014)

I think my motivation is based on Spanish students’ responses because Spanish students responded to us in very details... very long and precise.

(Student I2, PGDE Year 1, 28th May 2014)

consistent with other studies which found that interaction frequency and the quality of discourses can affect the level of participation (e.g., Davies & Graff, 2005; Fung, 2004; Jeong, 2003; Sing & Khine, 2006)
Choice of topic

• initiated by the participants → higher drives to studying about the topic

We compromised this discussion topic as this is a very common phenomenon. And when we searched information and read it, there are some inspirations for us to think. We have stronger motivation to discuss together, and share what we have known.

(Student K1, PGDE Year 1, 28th May 2014)
Conclusion and Implications

• Using online discussion as a form of e-learning
• Positive attitudes towards e-learning
  – useful and meaningful way of learning
  – deeper learning about curriculum issues across countries
  – reflections upon such experiences to be applied to future teaching
• Conditions for success
  – available online tools (i.e. Apps)
  – ownership of discussion
  – continuous interaction
Limitations

- Lack of generalizability of the findings due to a limited no. of participants
- Time constraints
  - Data collection
    - Methods: online discourse, surveys about learner satisfaction, ... etc.
    - Different perspectives (i.e. Spanish/Canadian participants)
- Further investigation of factors affecting motivation in online discussion that involves global partnership in other teacher education courses
Thank You