Use of Asynchronous Online Discussion for 9 year-old pupils in A Science Classroom

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Abstract

- Young students keen on Science
- Not enough time for them to share during the typical Science Lesson
- Using Asynchronous Online Discussion
- Case study
Pedagogical affordances of Asynchronous Online Discussion (AOD)

- Equal chance to participate in discussion
- Keep a record of their discussion
- Allows students to externalize what they have known

(Bali & Ramadan, 2007; Salmon, 2002)
Research studies on AOD

- Mostly in higher institutions.
Purpose

- Explore the use of AOD for a group of thirty-four 9 year-old mixed ability pupils in a Science Class
Research Questions

- How can the teacher encourage the pupils to participate in the AOD?
- How does the AOD enhance the pupils’ learning experience?
Participants

- Thirty-four 9 year-old pupils (mixed ability)
- Classrooms were technology-enabled with wireless connection and one-to-one computing
  - Part of Singapore FutureSchools @ Singapore
  - Pervasive use of technology for them since Primary 1.
Implementation

- Created using Forum in the school learning management system powered by Moodle
  - Current School LMS
  - Familiar with Moodle
Implementation

- Adopted the approach suggested by Wong, Hew and Cheung (2008)
  - Pupils grouped into groups of 4 or 5
  - Pupils contribute to the Group Forum
  - Teacher demonstrate the use of Forum in class
  - Pupils try it out in class first
  - Letter send to parents
Data Collection Instruments

- Teacher Observation
- Forum postings
- Perception Survey and Focus Group Discussion
- Statistics Logs in Moodle
Results and Discussion

- Teacher’s Role
- Contribution Pattern
- Pupil’s Learning Experience
Results and Discussion – Teacher’s Role

- Contributing to the AOD regularly
- Initiate new discussion
- Ask probing questions
- Praise the pupils
- Provide Information
Results and Discussion – Contribution Pattern

- Low Participation Rate at home (40%)
  - Not allowed to use computers at home
  - “Not serious” homework
- Structure AOD-based lessons in class
Results and Discussion – Pupils’ Learning Experience

- Enjoyed Learning (70%)
- More likely to view than contribute
  - Too shy to share views online or were not willing to willing to critique others’ posts (Hemmi, Bayne & Land, 2009; Otter, Whittaker & Spriggs, 2009).
- Learn from their friends
  - “I read the Forum posts because some things my friend know I might not know thus if I read the Forum posts I can learn more”.
  - “So that I can learn more and if I'm wrong, they can correct me”.
Results and Discussion – Pupils’ Learning Experience

- Mainly contributing learning-related posts
  - Provide formation (answering their friends or the teachers’ question)
  - Asked questions to clarify their doubts
  - Corrected their friend if they were wrong
  - Posted new topics to initiate new discussion
- Even at-risk students are participating
Results and Discussion – Pupils’ Learning Experience

- More dialogic discourse
- Complement the authoritative discourse in class
Conclusion

- Young pupils are ready to participate
Conclusion

School Environment

Teacher's Support

- software

- hardware

Availability of Computer Access at School

Home Environment

Parent's Support

- software

- hardware

Availability of Computer Access at Home

AOD-based Learning
Limitations

- Parents’ perception on AOD
Thank you

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