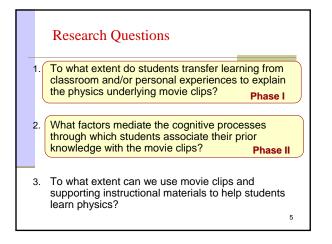
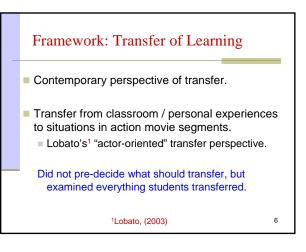


Overarching Goal

Investigate whether and how movies can be used to help introductory students to learn physics.

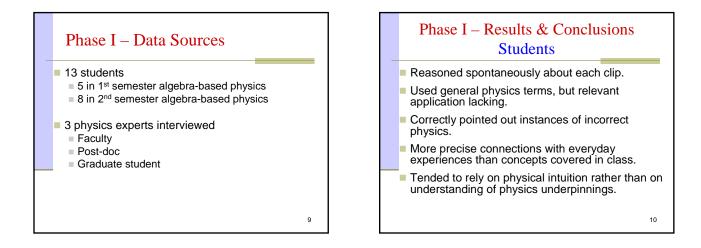




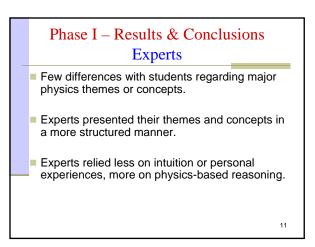
Phase I – Methodology

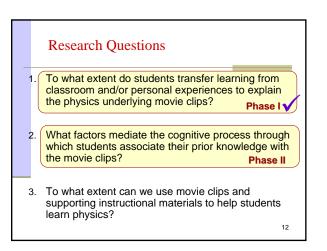
- Grounded Approach
- 8 video clips: Plausible and questionable physics.
- Individual, think-aloud, semi-structured interviews.
- Question strategy: Explore students' connections to physics and personal experiences.
- Interviews videotaped, reasoning patterns analyzed.

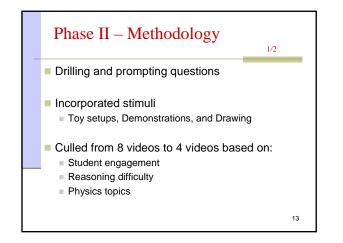
Video	Major Physics Themes
Pearl Harbor	Projectile motion
Speed (bus jump)	Projectile motion
Matilda	Newton's laws and circular motion
Speed (bus turn)	Circular motion
Mission to Mars	Gravity and rotation
Tommy Boy	Projectile motion and circular motion
Speed 2	Momentum and collisions
Tango and Cash	Projectile motion and electricity

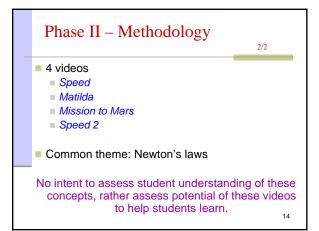


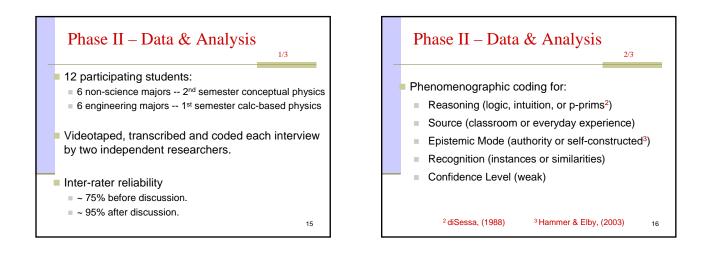
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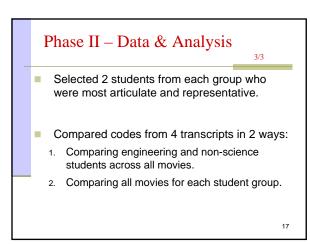


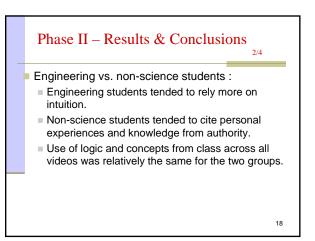






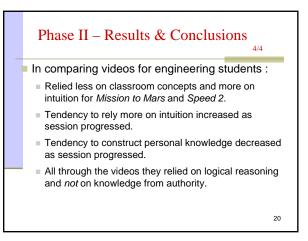


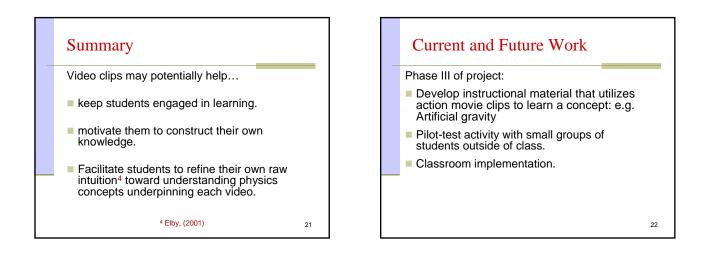






- In comparing videos for non-science students:
 - In Speed and Matilda, tended to used more on concepts covered in class.
 - In Mission to Mars tended to rely on intuition while explaining artificial gravity.
 - Epistemic mode tended to change from reliance on authority to self-constructed knowledge as session progressed.





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