

Ravi J. Matthai Centre for Educational Innovation
Indian Institute of Management, Ahmedabad

Gamification, Technology and Learning Motivation

Term: V & VI
Offered to PGP-II (elective)
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Motivating and engaging individuals for learning new things is often essential for organizations that strive for growth. Gamification provides a useful mechanism in this regard and is increasingly being employed across the fields of education, health, public services, business and management. It is the application of game design elements in real-world context to motivate user behaviours. This course provides an opportunity to develop an understanding of gamification, human learning and motivation theories and then apply this knowledge to devise and conduct interventions for improving academic as well as non-academic outcomes of students particularly those from underserved communities.

Course Objectives

- To understand gamification, human learning and motivation theories, and the role of technology in education
- To develop skills for conducting an intervention in a real setting
 - Identifying problems related to motivation in individuals
 - Identifying measurable goals for the intervention taking all stakeholders on board
 - Devising a comprehensive intervention plan
 - Monitoring and Evaluating the Intervention
 - Presenting the findings to Peers
- Writing and publishing an empirical intervention study on a public platform

Evaluation:

Blog for Class-Project: **30%** (team task)

Reflection Paper (individual task): **25%**

Providing Feedback to Other Teams: **5%** (individual task)

Class Presentation: **10%** (team task)

Class Participation: **10%** (individual task)

In-class Challenge (session 17-18): **10%** (team task)

Ratings from other players of your own Team: **10%** (Peer rating rubric is attached at the back)

Field-Project:

The class will be divided in five-six teams (preferably 4 students in a team). Each team will be working with 8-10 SMILE students.

Tasks:

You need to devise, implement, monitor and evaluate an intervention that could help the SMILE students do better in their academic as well as non-academic pursuit. Teams are responsible for identifying measurable goals prior to the interventions. For this, you may have to spend about two hour/week with the [SMILE](#) students throughout the course (~ total 10 weeks). You may also need to interact & work with other stakeholders (e.g., teachers, parents etc.) to make your intervention more effective.

Teams need to create a blog:

- Teams are required to create a page and write the following sections (in total, ~ 2000 words for all sections):
 1. Case narratives with concealed identity of SMILE students (around 800 words):

This could include the following details:

 - Demographics (age, gender, social-economic status, parental educational level, caste/religion, linguistic/regional identity)
 - Personal & Family background
 - Significant stakeholders in individual's life
 - Describe the ecology of learning (in context of sessions 3-4)
 - What could be the triggers for hope, motivation, frustration, fears, & happiness
 - What are challenges that the individual faces?
 2. Goals for the intervention (should be measurable)
 3. Description of the proposed intervention
 4. Procedure for implementing & monitoring the intervention (could also provide evidences in the form of pictures/videos of various interventions activities)
 5. Analytic Plan (describe how you tested if the intervention was successful)
 6. Results
 7. Limitations (include things you would have done differently) & Conclusion

In addition, each individual member needs to write a “**Reflection Paper**” (Total 2000-2500 words including all references)

- You need to write if and how the theories you learn in classroom explain the beliefs, thinking, behaviours, rationalization, relationships, and motivations of your SMILE students.
- Also discuss if/how you could incorporate gamification and/or technology for motivating and engaging SMILE students in learning.

Teams are expected to provide constructive feedbacks to all other teams on their blogs.

Teams also need to present their project in class (during sessions 19 - 20).

General Readings:

TEXT BOOK: Schunk, D. H., Meece, J. R., & Pintrich, P. R. (2012). *Motivation in education: Theory, research, and applications*. Pearson Higher Ed.

NOTE for SCHEDULING: The class is structured for the format of two sessions in one meeting.

Session 1 & 2	<p>Understanding the Class Structure Demonstration of Blog Creation Assigning Cases for the class project</p> <p>Gamification: What is it? Reading</p> <ul style="list-style-type: none">• Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011, September). From game design elements to gamefulness: defining gamification. In <i>Proceedings of the 15th international academic MindTrek conference: Envisioning future media environments</i> (pp. 9-15). ACM. <p>Watch:</p> <ul style="list-style-type: none">• Jesse Schell (2010). DICE Summit. When Games Invade Real Lives: https://www.ted.com/talks/jesse_schell_when_games_invade_real_life#• Gamification to improve our world: Yu-kai Chou at TEDxLausanne: https://www.youtube.com/watch?v=v5Qjuegtiyc
Session 3 & 4	<p>How to Apply Gamification in Education Understanding the Learning Ecology Reading</p> <ul style="list-style-type: none">• Huang, W. H. Y., & Soman, D. (2013). A practitioner's guide to Gamification of education. <i>Research Report Series: Behavioural Economics in Action, Rotman School of Management, University of Toronto</i>. Available at: https://pdfs.semanticscholar.org/c1df/e1970305f257b08a9f2b9844b346452eb869.pdf• Shukla, K. (January 2015). <i>Educational Ecology of Memorization</i>. Available at: http://globiansperspective.blogspot.in/2015/01/educational-ecology-of-memorization.html
Session 5 & 6 (Due: Case narrative)	<p>Technology & Social Media: Distractor or Enabler for Learning? Watch Video:</p> <ul style="list-style-type: none">• Wisdom 2.0 (2014). Technology and the Brain, the Latest Research and Findings: Larry Rosen. Available at: https://www.youtube.com/watch?v=n0OqA0pmAag <p>Reading:</p> <ul style="list-style-type: none">• Deshmukh, K., & Shukla, K. (June 2017). <i>Seek, Filter, Network</i>. Teacherplus. Available at: http://www.teacherplus.org/2017/may-june-2017/seek-filter-and-network <p>In-class Case: Rahul: The Fall of a Bright Students Vs. The Rise of a Clan Leader</p>

Sessions 7 – 14: Fundamentals of Learning Motivation in Education

<p>Sessions 7 & 8 (Due: Goals & proposed intervention plan)</p>	<p>Conditioning of Mind: Classical & Operant Individualistic learning Vs. Social learning: Works of Vygotsky & Piaget</p> <ul style="list-style-type: none"> • Social Interaction & Development, Zone of Proximal Development • Cognitive Development Theory <p>Expectancy Theory Reading: Chapter – 1, & 2 Schunk et al. (2012) In-class Case: Pioneering an e-schools: How about that?</p>
<p>Sessions 9 & 10</p>	<p>Locus of Control - Attribution Theory Self-Efficacy Theory – Bandura Reading: Chapter – 3 & 4; Schunk et al. (2012) In Class Case: Thakore, the Kabaddi Champ!</p>
<p>Sessions 11 & 12 (Due: Procedure for implementing & monitoring the intervention)</p>	<p>Achievement Goal Theory Self-Deterministic Theory & Self-Regulated Learning Reading: Chapter – 5 & 7, Schunk et al. (2012) In-class Case: Ms. Sonal, the Rockstar Prof of Vastrapur School of Business</p>
<p>Sessions 13 & 14</p>	<p>Are Experts Born or Made? Growth Mindset and Deliberate Practice Reading:</p> <ul style="list-style-type: none"> • Clynes, T. (2016). How to raise a genius <i>Nature</i>. Available at: https://my.vanderbilt.edu/smpy/files/2013/01/Article-NATURE-2016.pdf • Ericsson, K. A., Prietula, M. J., & Cokely, E. T. (2007). The making of an expert. <i>Harvard Business Review</i>, 85(7/8), 114. • (Listen to Podcast) Freakonomics Radio. (April 27, 2016). How to Become Great at Just About Anything. http://freakonomics.com/podcast/peak/ <p>In-class Case: Ishrat's Dilemma</p>

<p>Session 15 & 16 (Due: Reflection Paper; individual assignment)</p>	<p>Educational Problems need Technical Solutions or Technical Companies need Educational Market? Reading:</p> <ul style="list-style-type: none"> • Singer, N. (May 13th, 2017). <i>How Google Took Over the Classroom</i>. The New York Times: https://www.nytimes.com/2017/05/13/technology/google-education-chromebooks-schools.html <p>In-class Case: Client-Server (C-S) Model in Education: Brilliant Solution or Things-going-down-the-drain?</p>
<p>Session 17 & 18</p>	<p>In-class Challenge: Teams will be randomly assigned the following short-cases in class and will have to design intervention in 20 mins which will be evaluated by other teams on a set of criteria: 1) Coastal School's Relevance</p>

	2) Alice's Educational Evangelism 3) Chirag's Tiffin-service 4) Swara's unstoppable zeal meets Patel's immovable focus
Session 19 & 20 (Due: all sections of the Blog)	Class Presentations & Class Picture

Peer-Rating Rubric

You will use this rubric to rate the performance of every other member of your team on team projects. Similarly, other members of your team will also use this rubric to judge your performance. The purpose of this rubric is to ensure that everyone is contributing equally and adequately to the group project. It is not designed to identify the person who made the best contribution. It is possible for everyone to obtain the maximum score. You cannot make yourself look better by giving unjustifiably low ratings to others. Your final score will be the average score assigned by other members of your group.

I. Quantity and Timeliness of Contribution

Points	Description
2	Almost always did as much work as other team members: This person does his or her fair share of the work. Tasks are completed on time.
1	Occasionally did less work than other team members: This person contributed an adequate amount of work to the group project but a few of his or her tasks required noticeably less work than similar tasks assigned to others. This person occasionally submits work that is late according to the group schedule.
0	Almost always did less work than other team members: This person contributed very little to the group project. He or she did not do his or her fair share of the work. This person passed his or her responsibilities onto other group members. This person manipulated others into doing more than their share of the work. Work is most often untimely and disruptive to the group schedule.

II. Quality of Contribution

Points	Description
4	Almost always at or above my expectations: This person consistently contributed thoughtful, well planned work that required little to no revision by other group members. For example, this person clearly communicated ideas in written products. In addition, the person submitted written products that contained little to no grammatical and spelling errors. I could trust this person to do the highest quality of work. If a person makes contributions at this score level, the person submitted work to the group that was consistently on par with expectations or exceeded expectations for each phase of team assignments (i.e. Met my expectations 80% of the time or more).

2	Occasionally below my expectations: More often than not this person's work was on par with expectation. Other members needed to occasionally refine this person's work or encourage this person to revise his or her work. If a person makes contributions at this score level, the person submitted work to the group that was on par with expectations more often than not. The quality of this person's work did not impede group efforts (i.e. Met my expectations 50% to 79% of the time).
0	Almost always below my expectations: This person's contributions lacked quality and impeded the group effort. He or she consistently submitted first draft or rough draft quality work and relied on other group members to improve the quality of his or her work. This person made contributions that only increased the burden on other group members. The group would have been better off without this member (i.e. Met my expectations less than 50% of the time).

III. Quality of Group Interaction

Each team member should interact with others in a considerate and professional manner. This interaction is not only between team members but also between the team and SMILE students.

Points	Description
4	Almost always engaged in professional interaction and communication: This person allowed others to express their opinion and encouraged alternative viewpoints to be heard. Difference of opinion was acknowledged by this person and did not generate conflict within the group. This person did not coerce or force other group members into agreement. Communication was respectful. Written communications from this person were clear and to the point and included good grammar and punctuation.
2	Occasionally engaged in professional interaction and communication: More often than not this person engaged in professional communication and allowed others to be heard. This person occasionally debated superfluous issues with others or occasionally dominated the conversation unnecessarily.
0	Almost always engaged in unprofessional behavior and used poor communication: This person was disruptive to the group and made it difficult to hold group meetings. Communication was disrespectful, lacked adequate grammar and punctuation, or was generally immature. This person was always silent during group conversations.