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GameLead: A gamified application to engage learners

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Citation

GameLead: A Gamified Application to Engage Learners

By TAN, Rani & Sockalingam, Nachamma

QS Stars Reimagine Education Awards 2015 < http://application.reimagine-education.com/>

This submission describes the use of gamified learning to engage learners using a mobile/desktop application called "GameLead" in higher education. GameLead is easy to access and use, and it encourages cognitive and social learning, to engage learners.

Singapore Management University

Introduction
Engaging learners in the learning process is critical for high quality teaching and learning as well as lifelong, transformative learning. Yet, engaging learners is not an easy task. Often, students tend to be merely motivated by external factors such as grades or the pressure to acquire a recognized educational certificate. To promote intrinsic motivation and engage learners, educators recommend several strategies such as using authentic contexts, authentic tasks, collaborative learning and reflective learning to name a few. This project attempts to combine several of these features and present these in a gamified application called "GameLead"

GameLead was designed designed by Dr. Rani Tan, Senior Lecturer in the Lee Kong Chian School of Business, Singapore Management University (SMU), together with her Teaching Assistants of Academic Years 2013/2014 (Term 2). This application was designed to be used in the Leadership and Team building (LTB) course, and hence the name GameLead. It has since been used over three terms in her four classes of approximately 170 students each term. The objective of the application was to engage students in learning beyond the classroom in an easy, intuitive and seamless manner.

To understand how this application could be used effectively to enhance teaching and learning, a systematic study is undertaken by educational researcher Dr. Nachamma Sockalingam from the Centre for Teaching Excellence, SMU.

This submission gives a brief outline of the GameLead application, its objectives, explains how it was used/implemented in teaching and learning, analyses student sentiments on the use of GameLead on Teaching and Learning and suggests the potential use of such applications in teaching and learning in general.

Synopsis

Objective
Rani was introduced to the concept of gamification and gamifying the Leadership and Team building module by her (former) Teaching Assistant, Keith Ng, during his days at SMU. After a discussion on the benefits and potential of introducing a digital experience with smart game mechanics for students, a concept soon became a working reality for the module.

The overall objective of Leadership and Team building (LTB) course in Singapore Management University (SMU) is to build students' competency to help them develop their own leadership awareness and values, motivating them to be effective leaders. In particular, the course aims to help students understand the factors of effective leadership so that they can accurately assess their own strengths and

weaknesses as leaders, and develop a personal plan for leadership development. It is therefore critical that students are reflective, self-directed as well as collaborative learners.

Undoubtedly, leadership and team building as a topic bears profound implications in the everyday lives of students, beyond the boundaries of the classroom. To truly learn and embody the knowledge and skills required, there was a need for greater application of these concepts outside the boundaries of class-based activities. There was also a need to engage the students more actively in the classroom discussions and make the learning more meaningful to them so that it leads to transformative learning.

The objective, therefore, was to gamify the course to improve student engagement of learning material beyond the classroom in an easy, interactive and seamless manner using a mobile and web application that complemented learning materials taught in a way that students had the freedom to access and play at their convenience.

Approach
The GameLead application consists of a series of nine quests for the students to complete over a period of nine weeks. The content of the activities were generally related to leadership and teambuilding.

To help students familiarize with the GameLead application, students were given a set of tour screenshots and explanation to orientate them in the beginning of the course. Thereafter, the quests were made available at the start of each week for students to play with, with preceding quests left unlocked for the students to review.

Each quest contained a series of challenges that prompted students to reflect, apply and act upon ideas that were brought up during class for that week. Examples of challenges included watching of videos on exemplary leaders, snapping photos of team activities, answering simple quiz questions, and reflecting and sharing of thoughts and insights.

Upon completing a challenge, students received points within GameLead. With the points earned, students had the option of redeeming attractive rewards such as choosing presentation slots, that is, the week they wish to do their group presentation assignments in class.

The application interface included social features such as a newsfeed section, where students could view, vote, and comment on the past submissions of their classmates. To introduce a degree of competition within the application, students were ranked accordingly on a live leader board based on the number of points they had received by completing the given challenges.

In practice, GameLead was used by the students outside of class and their online reflections and discussions (using the application) are integrated into the in-class sessions through weekly discussions.

It should be noted that the use of GameLead application as part of the course is voluntary and not included for grade computation and yet all students participated actively.

Engagament
The LTB course is interactive and experiential in nature. Students are required to engage in small group discussions and work in teams, both in and outside of class. They also participate in leadership and teambuilding exercises; individually and collectively, they reflect on their experiences through class discussion, and written assessment and develop their plan for improving leadership skills. Finally, students present their projects and project experiences to classmates, teaching assistants, and the professor.

The GameLead application augments this learning process by connecting the students, to the content, team members, other teams and instructors/teaching assistants in a virtual community space that is accessible asynchronously anytime, anywhere, throughout the entire duration of the module.

Through GameLead, students get to understand themselves and team members better through several reflective and teambuilding activities. For instance, students were asked to take a creative selfie with their team members, reflect on their leadership skills and identify ways in which their teams worked well. The application included independent as well as collaborative activities. On top of that they view, vote, and comment on the submissions of their classmates. Such activities helped students to be socially and cognitively engaged.

The application also makes use of gaming elements such as points, achievements, rewards and leader board to motivate students extrinsically. The choice of activities (such as videos on exemplary leadership) is designed to motivate students intrinsically. In this way, the GameLead application and the design of activities engaged the students.

Impact
Students' perception on the use of GameLead has been collected each term and this particular submission reports on part of the data collated during the most recent run in April 2015.

A total of 173 responded on an online survey on the use of GameLead in LTB course in Term 2 of Academic Year 2014/2015 (On average, each class is about 50 students). The online survey included 17 quantitative questions and 5 qualitative questions.

Of the 173 respondents, 24% responded that they had not used mobile applications such as Gamelead in their formal learning before. Despite that, 96% indicated that the application was easy to use.

90% indicated that GameLead activities challenged them to relate LTB content to real-life situations and that they helped them to learn from peers. 87% felt that the activities made them think deeper about what they are learning in the course. 76% reported that they spent longer than 30 min each week on GameLead activities. 76% of the respondents indicated that they would recommend the use of GameLead applications in other SMU courses. Overall, the quantitative data suggested that the use of the GameLead application and the activities led to engaged and deeper learning as desired.

Students' feedback included comments such as

"It was a good way to reflect after each lesson on the content taught, as well as to bring together the topics we have learnt across the weeks"
"It allows learning beyond classroom"
"Everyone in class was given same questions and by looking at many different responses, it helped me to ponder more"
"Reflective questions on our own leadership qualities and abilities allowed us a chance to actively think about how we can improve as a leader instead of making too many mistakes when we are a leader."

Next Steps
Our experience with GameLead indicates that its application has great value in teaching and learning. We hope to not only develop and use the application in teaching and learning for the fun and novelty of it, but also take a scholarly approach in designing the activities based on pedagogical frameworks and theories, and share it with the wider community for the benefit all. Our future plans include these:

1) The Leadership and Team building course is one of the core university courses in SMU and it is undertaken by all first-year students. This accounts for approximately 1046 students (From Academic Year 2015, Term 2). GameLead has been tested in Rani's four classes (170 students each term), over three terms and it is now being used by the other instructors teaching the same module. The future plan is to try this for the entire LTB courses and encourage instructors in other modules to use too.

2) It should be noted that the "shell" of the mobile application can be adapted and used in any course (at any level). The activities can be modified to need the objectives of the course and teaching. Hence the project has the potential for direct and immediate application in many fields/courses. This means that other instructors need not need create the mobile application once again. All they need to do is to change the questions and challenges. However, they also have the flexibility to modify the application. Hence, there is a wider scope of application.

3) The feedback on the application suggests that the use of GameLead is very easy to use and that it is valuable in teaching and learning, both from the perspectives of the students and instructors/teaching assistants. Students' feedback on other aspects of engaging with the application has provided very meaningful insights. For instance, their feedback suggests that the design and choice of activities as well as the rewarding strategy is crucial for the success of GameLead application. Thus, one of the next steps would be to take a more scholarly approach into investigating the role of independent elements such as instructors, activities, rewards on students' experience with the application and its impact on their learning. We will be sharing our research findings in time to come with the wider community to benefit more.

GameLead Application Download
https://play.google.com/store/apps/details?id=com.gamemaki.gamelead

URL: http://application.reimagine-education.com/the-winners-individual/2015/320/734c6f4ccc41e4e7138da79c1c3d31a5/Singapore+Management+University+

See Appendix: Sample Course Outline of LTB

OBHR 101 MANAGEMENT OF PEOPLE AT WORK

Instructor Name   : Rani Tan
Title   : Lecturer of Organisational Behaviour & Human Resources
Tel   : 6828 0767
Email   : ranitan@smu.edu.sg
Office   : LKCSB #5105
Class Timings   : 12noon – 3.15pm (Tuesday, Wednesday and Thursday)

COURSE DESCRIPTION

This course focuses on managing people in the workplace. Students learn theoretical and conceptual foundations for understanding people, groups, and organizations, and practical tools for accomplishing personal, group, and organizational objectives. Topics include work motivation, decision making, organizational culture, organizational change and stress management, power and politics, personality and individual differences, and work values, attitudes, and emotions, among others.

LEARNING OBJECTIVES

By the end of this course, students will be able to:
- Define key organizational behavior terms
- Identify organizational behavior constructs in organizational settings
- Analyze organizational problems using major organizational behavior theories
- Put organizational behavior theories into practice to address organizational problems

PRE-REQUISITE/ CO-REQUISITE/ MUTUALLY EXCLUSIVE COURSE(S)

Please refer to the Course Catalogue on OASIS for the most updated list of pre-requisites / co-requisites for this particular course.

Do note that if this course has a co-requisite, it means that the course has to be taken together with another course. Dropping one course during BOSS bidding would result in both courses being dropped at the same time.

Academic Integrity

This course has a "zero tolerance for violation of academic integrity." More than anything else, you should not cheat at the exam. If you are involved in any attempts of cheating at the exam, you will fail in this course. If you believe there has been an infraction by someone in the class, please bring it to my attention.

ASSESSMENT METHODS

Final Exam	40%
Case Study and Discussion	10%
Organizational Field Research Presentation	30%
Class Participation	18%
OB Research Participation	2%

Grading Scale

1. **Case Study and Discussion**
   For each topic covered in class a case study and discussion will be led by a group. You can choose to form your own groups – you are free to work with their friends if you wish. Details will be mentioned in class on the first session. The presentation group must submit a **hard copy** of their power point **handout with 6 slides to a**

page. Please do not submit more than 12 slides per presentation as your time limit is **10** minutes with **5** minutes of Q & A. Distribution of marks will be based on team coordination, quality of content, maturity of thought, and ability to initiate and lead class discussion.

2. **Organizational Field Research Project**: Each of the groups formed will also attempt to interview people in organizations who work with others and have opportunity to manage and supervise their subordinates. The outcome of the findings will be presented in class as a group presentation. Each group must **identify** a workplace issue or problem that corresponds to the management of people at work as exemplified by our course outline and teaching materials. **Analyze** the issue or problem and then engage in **problem-solving** by suggesting **plausible recommendations.** You are free to explore any area of your own interest as long as it is within the confines of this module. For example, you may want to explore how managers or team leaders make decisions and what problems they encounter and suggest recommendations in your final group presentation in class. The presentation group must submit a **hard copy** of their power point **handout with 6 slides to a page**. Please do not submit more than 12 slides per presentation as your time limit is **10** minutes with **5** minutes of Q & A. Distribution of marks will be based on team coordination, quality of content, maturity of thought, and ability to initiate and lead class discussion. (See additional notes on some tips about the interview method!)

3. **Class participation**: Meaningful discussions are encouraged in class and students are expected to be interactive. Class attendance record is also factored into class participation.

4. **OB Research Participation**
   As one of your requirements for this course, you are expected to participate in research studies being conducted by the Organisational Behaviour faculty at SMU. Each student is expected to complete three units of research participation during the term; each unit typically involves one hour of participation. (Therefore, your total requirement is two hours for the term). Each unit of participation is worth 1 percentage point (or 2% for the two units) out of a possible 100% total in this course.

   Information regarding research studies will be provided throughout the term on the Business School's online SPS at https://mercury.smu.edu.sg/PrjgSPS. You also sign up for studies conveniently through the same website. Note that most studies will be offered during the second half of the term, so there is no need to worry if you have not been able to complete all studies by the middle of the term. Be assured that there will be <u>a minimum of four studies</u> over the term. Please note, however, that we cannot guarantee that you will be able to get the full two credits if you are picky about the specific dates and times you sign up for sessions.

   In order to enable smooth and efficient data collection, it is important that you show up for study sessions you signed up for. Cancellations need to be made via the SPS as soon as possible and at the latest by the time specified in the SPS for that particular study. Should you fail to show up for a session you signed up for (and did not cancel in time), <u>one percentage point will be deducted</u> from your account.

   To make sure you are credited the number of percentage points you deserve, it is your responsibility to check via SPS by the day before finals week that your participation has been correctly recorded in the SPS. <u>If you suspect that there has been a mistake, immediately contact the SPS administrator or your instructor</u>. Any complaint received after that time will be considered only at our absolute discretion as grades may have been submitted already.

   Besides contributing to the specific research project, and ensuring that you receive your full participation credit points for MPW, there are several other benefits of participating in research studies. First, note that all the knowledge you will encounter in MPW is derived from research. By participating in research, you are able to contribute back to, and further build, that knowledge base. Second, by participating in research you gain insights into the nature of scientific investigation and the research process, which constitutes a valuable way of learning to improve organizational practices. And third, note that SMU aspires to excellence in teaching *and* research. For most of you, participating in research is one of the few opportunities you will have to contribute to the research mission of the university.

   If for any reason you do not wish to participate in research studies, you can write a short research paper instead. This involves obtaining two scientific articles related to organisational behaviour and that are not related to your other projects in this course. The papers should be written by SMU OBHR faculty (check SMU's website for their CVs and download the papers from the library databases). These articles should not be completely opinion or discussion, but rather must be articles that describe scientific studies. After you obtain the articles, answer the following questions: What was the purpose of each study? What were the hypotheses? What was manipulated and/or measured? What were the results of this study? What are the

implications of this study's findings? You may discuss the two papers sequentially. The paper needs to be four pages minimum, with 1.5 line spacing. Each <u>paper</u> (each of which reviews two research articles) completed is worth one unit.

INSTRUCTIONAL METHODS AND EXPECTATIONS

Besides lectures and required readings, students will also learn from case discussions, group project, video-based discussions, self-assessment, etc. Students are expected to participate actively in class discussions and at presentations and contribute to peer learning.

CONSULTATIONS AND TEACHING ASSISTANTS

Teaching assistants will be announced in the first class. If you need to see me for consultation, please contact me to make appointment. My office and contact information are listed at the top of this course outline. I am also readily available by email.

CLASS TIMINGS

This course will be taught in 3-hour sessions, three times per week as indicated above.

RECOMMENDED TEXT AND READINGS

Gary Johns and Alan M. Saks, 2010, Organizational behaviour: understanding and managing life at work. (8th Edition, that is 8/E), Pearson Prentice Hall.

Note: Please purchase the latest edition with new cases and other materials that will be used for your class assignments.

WEEKLY LESSON PLANS

Session No.	Topic	Related Chapters
1	Introduction to OB	Chapter 1, Appendix
2	Perception, Attribution and Judgment of Others	Chapter 3
3	Values, Attitudes and Work Behavior	Chapter 4
4	Motivation in Practice	Chapter 6
5	Organizational Culture	Chapter 8
6	Decision Making	Chapter 11
7	Conflict and Stress	Chapter 13
8	Organizational Change and Development	Chapter 16
9	Power, Politics, and Ethics	Chapters 12
10	Some Additional Topics/ TBA	
11	**Group Presentations**	
12	**Group Presentations**	
13	**Group Presentations**	
14	Study Break	

This course description and outline are subject to change. Changes will be announced in class.

Please Note: The information below is used with the permission of Prof. Jaepil Choi, one of our own OBHR faculty.

How Can We Conduct the Interview More Successfully?

You want to enter the interview with some sort of outline. This should be a list of questions and some potential follow-up questions. They should be in some logical order and give you the information that you need. How do you develop this outline and conduct the interview? Well, each group's interview outline and style will be a little different, but here's some general advice:

Have a clear purpose – Of course, you want to know about motivation practices of managers and their organizations. Please note that motivation is a very broad concept and there are diverse practices to motivate employees. Try to plan what you want to know. Decide which issues you are going to include in your group project. The textbook and course materials would be helpful.

Start somewhere – Choose a starting point. One common starting point is a few background questions about the person and/or company to break the ice.

Organize your issues –The questions should flow logically and go from the general to the specific.

Taking notes - You can either write everything down or tape the interview (with the manager's permission). Even when you use a tape recorder, take some general notes anyway. Be sure to go over your notes after the interview (immediately, or within an hour or so). This way you will still recall well enough to fill in gaps and augment your notes.

Be flexible – Listen carefully to the answers given and make adjustments. The key is to ask open-ended questions, listen carefully and follow-up. Let the answers lead you to the follow-up 'why' and 'how' questions.

Be polite, objective and professional - Approach it as a conversation, not a legal deposition. Assure your manager that you will keep any names, events, and such confidential if he/she wishes. Allow your manager to decline to discuss topics if he/she so chooses.

Be friendly and attentive - Focus on the positive. Pay attention and take an interest in what the manager is telling you. Reflect your interest back in your comments.

Don't:	Do:
"Grill" • Ask a lot of yes/no • Ask closed ended fact based questions	• Ask open-ended, specific questions
"Quiz" • Put the manager on the spot • Require the manager to remember facts and figures • Require the manager to know and use the books terminology	• Let the manager decline answering • Let the manager think about the question • Explain what you mean by a term or concept (without lecturing)
"Lead" • Pre-judge situations • Impose your own ideology and views • Ask questions in a way which limits the reply	• Keep an open mind • Accept the answers that are given • Allow for differences of opinion

... and have fun. This should be an interesting and enjoyable experience. This is an opportunity for your manager to share his/her insights and a chance for you to catch a glimpse of the 'real world'. **Enjoy it!!!**