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COURSE LEVEL GAMIFICATION
FOR HIGHER EDUCATION TEFL IN JAPAN

ABSTRACT**.** Gamification of Teaching English as a Foreign Language (TEFL) in Japan seems to remain largely unimplemented despite adoption in other areas of education in Japan and outside of Japan. This study considers the position of gamification in TEFL education in Japan. As no examples are found in academic discourse of course level gamification in business English education in Japan, the paper offers two examples of course level gamification in place at Kyoto University, Japan. Finally, the paper confirms whether the examples provided are gamified, whether they are appropriate, and what benefits they deliver in their present form to students and educator.

Keywords: Business English, Gamification, Japan and TEFL.

1. Introduction

Over the past five years there has been a rapidly accelerating academic discussion of gamification. Gamification has existed in various formats as educational games ranging from standards such as Hangman to card games about dinosaurs to electronic toys and console games. Japan is particularly blessed with educational games from leading companies like Nintendo and Benesse. Academic discussion of classroom application of gamification however remains limited as demonstrated below. Japan's higher education classrooms for Teaching English as a Foreign Language (TEFL) may be growing but has not been well reported in academic literature.

This study attempts to find the place of gamification in higher education TEFL in Japan. The study first shows the rise of interest in the topic and its

weak position in TEFL in higher education in Japan, thereafter clarifies the meaning as well as the purpose of gamification. The voices of educators are briefly considered to position gamification in the context of practitioners. The study concludes with an analysis of two gamified courses to confirm their utility and suitability for the classroom. Conclusions are drawn about the benefits of gamification to higher education TEFL in Japan.

2. Background

Internet searches can identify a trend, if imprecisely with academic or policy implications for example in epidemiology (Seifter et al.), software (Rech) and economics (Saiz and Simonsohn). A recent search of Google Books revealed more than 100 English language titles written since 2010 on gamification, mostly non-academic, and many on business topics. A search of the decade prior found fewer than 20 such books. A keyword search for gamification, removing citations and patents, through Google Scholar identifies a rising tide of papers on the subject in recent years as shown in the table below, confirming a similar review extending into 2013 by Hamari, Koivisto, and Sarsa (2014). However, the trend barely extends to include TEFL and is similarly weak for TEFL in Japan. The trend appears to be tapering as of 2015, even as the topic is nascent with regard to and TEFL in Japan.

Table 1 Keyword search count of hits on gamification

Year	2010	2011	2012	2013	2014	2015
Gamification	50	340	1320	2940	4780	4380
Gamification TEFL	0	0	1	1	3	4
Gamification Japan	5	50	150	290	480	520
Gamification TEFL Japan	0	0	1	0	2	3
ゲーミフィケーション (Gamification)	0	3	20	40	50	40
ゲーミフィケーション教育 (Gamification education)	0	2	10	20	30	20

The table above shows little apparent gamification discussion in higher education English teaching in Japan though much more attention has been directed to education topics in general in Japanese language articles. The trend evaporates entirely in checking the articles revealed by the search phrase "Gamification TEFL Japan" – not one of these articles directly discusses gamification of learning in Japan's classrooms. A review of the Japan Association for Language Teaching (JALT) Proceedings over the past five years revealed only one submission on employing games for learning (Baierschmidt),

but not gamification of teaching material. Likewise, a search of The Language Teacher, Japan's leading academic journal for foreign language teaching, revealed no articles on gamification. Among Japanese language academic articles, one article finds motivation improvements through gamification of reading (Yazawa et al.). While Japan is the home of such educational gaming giants as Nintendo and Sony, and the source or target of countless kanji (Chinese character) teaching apps, academic conversation around gamified education in TEFL in Japan remains only in its embryonic stage.

What is a game? In order to understand gamification, its purpose and potential, educators must first have a concept of a game. Casually, we consider games to be fun and to have rules, however driving a car would match this idea but not be a game (Crawford). In his detailed analysis on game design, Jesse Schell (2008) defines a game as fulfilling 10 requirements. These include technical specifications such a game must have rules, a way to progress, challenges, and be a closed system. Other requirements are that the game be engaging and create its own internal value (Schell 33) or include uncertainty (Costikyan). Kapp (2012) includes similar notions and adds that games have players and are abstractions. Other authors add the need for conflict, winners and losers (Fullerton), though these would be rejected in light of cooperative game genres like role playing and completion type games. Finally, Schell (op cit 37) summarizes a game as "a problem solving activity, approached playfully."

What is gamification? At first glance, gamification must be converting an activity or series of activities into games. In order to gain the benefits identified previously, student behavior may need to be changed. Design elements that trigger behavior or changes in behavior are called 'affordances' and may be physical, cognitive or social (Rome, Hertzberg, and Dorffner). A list of affordances for games might include points, leaderboards, badges, levels, themes, goals, feedback, rewards, progress, and challenge (Hamari, Koivisto, and Sarsa) as well as the items mentioned by Schell (2008) in his definition of games. The concept of flow, engagement that is neither too boring nor too challenging and which evolves with skill (Csikszentmihalyi) is included by some designers (Gibson). Employing affordances is part of the larger definition "The use of design elements characteristic for games in non-game contexts" offered by Deterding, Dixon, Khaled, and Nacke (2011 13). They however extend the concept of gamification to go beyond serious games and playful games to include 'gameful', i.e. those with design goals and user experience, though not necessarily fun or entertaining. This last point frees educators who fear being reduced to in-class entertainers, to design systems that are satisfying to learners and educators, without the pressure or distraction of including fun.

To what purpose gamification? Is the purpose then of gamification to be fun, emotionally engaging, and add playfulness to daily learning? A review of nine studies on gamification in education found that outcomes were generally

positive including increased motivation, engagement and enjoyment (Hamari, Koivisto, and Sarsa). A common goal, engagement, links game designers with instruction designers who are required to design for momentum in order to maintain the interest and participation of learners (Hodell). However, improved learning outcomes are also found by some (Cheong, Cheong, and Filippou; Domínguez et al.; Robb). Regarding learner outcomes, Franciosi (2014), identifies at least 14 empirical studies supporting improved learner outcomes through digital games, including language learning. Another purpose for gamification can be found in increasing time efficiency for the educator (Moules). Improved time efficiency would allow an educator to reallocate classroom time to coaching, assessing, or administering. Game author and educator Oliver Rose writing in an online Computer Aided Language Learning (CALL) forum of JALT pointed out administrative advantages to the teacher such as file management and progress tracking (JALT CALL Public Group). At least these five advantages, improvements in learner outcomes, teacher efficiency, enjoyment, motivation, and engagement, may be gained from successful gamification in education and form the core purposes of gamification for educators. Thus, educators may include enjoyment or fun in gamification, while insisting on other benefits.

At what level? The academic discussion around language teaching does not yet differentiate the level at which gamification occurs, though in business

education the distinction has been made (Jakubowski). This paper considers four levels of teaching interaction, from the bottom up: activities, modules, courses, and curricula. Activities can be understood as learning activities that engage learners as they respond to tasks and are meaningful to them at their level of ability (Beetham and Sharpe). The field of Instructional Systems Design defines a module as a single learning unit and a course as consisting of modules (Hodell). Meanwhile, a curriculum is a series of courses in one subject (Press). While gamified activities are commonly found in textbooks, online fora, and teaching periodicals, modules appear somewhat less commonly in the classroom. An informal poll of 12 higher education TEFL educators at the end of 2015 in Japan found that most used gamified activities, one used gamified modules, and one had gamified whole courses. An additional individual, not polled but identified in the literature, provides an extensive reading course for higher education in Japan, MReader, with gamified elements (Robb). Outside of Japan, acclaimed gamified English learning courses include GraphoGame which has resulted in reading improvements in early school children (Kyle et al.). A broader survey of educators would help to clarify the extent to which gamification permeates TEFL and how deeply into course structure and curricula it goes.

This study seeks to respond to at least the following research questions.

- Can the five potential benefits of gamification be attained in higher education TEFL in Japan? These benefits include improvements in motivation, engagement, enjoyment, learning outcomes and teacher efficiency.

- Are the courses presented gamified?

- Are gamified courses acceptable or preferable in the view of students?

- Are there implications to be drawn for gamification of TEFL in higher education in Japan?

3. Gamification Examples

3.1. Course: Business English

This course targets intermediate and low advanced (CEFR B1, B2 and A1) students. The students include a mixture of undergraduate local and exchange students at Kyoto University, Japan. In this course the students must successfully complete tasks in order to access the next level of tasks. Their grade depends on the number of tasks completed in the upper levels. Skills include for example presentation, summarization, email composition, short writing assignments, and student self evaluation. Business English courses may cater to almost any level of English and any content area from call center service to management. This task-based approach was chosen to provide students of varying interests and levels, from intermediate to advanced, with topics and

skills of practical use. The students are informed about the class structure using

the following graphics.

Figure 1: Task difficulty

Figure 2: Grade achievement
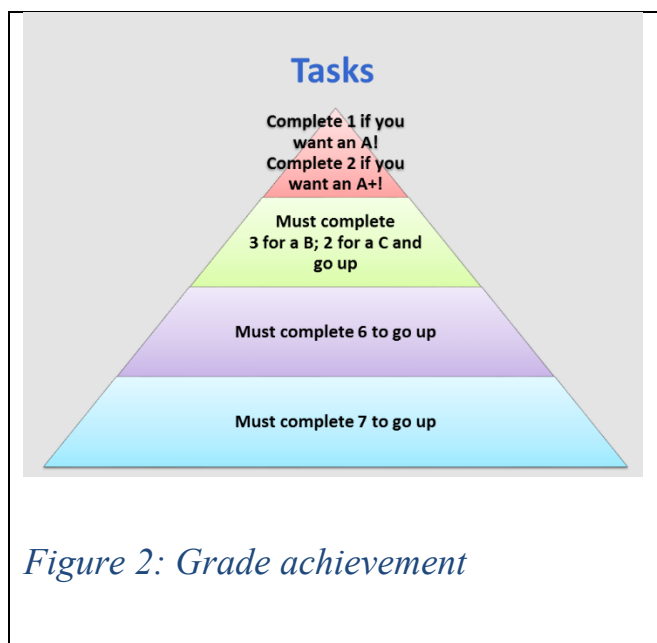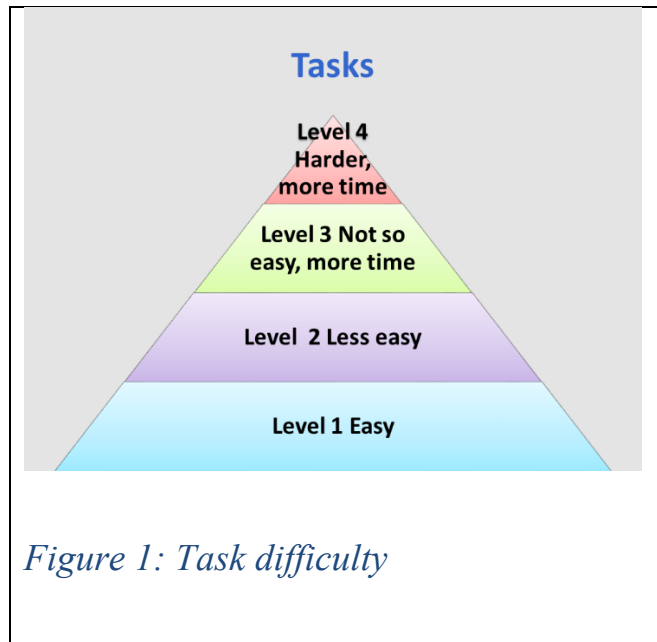
All students receive a booklet containing the above graphics, a full

explanation of the course, and a full catalog of tasks on paper and in electronic

format. They are encouraged to select tasks of interest by reviewing the catalog and to pace themselves accordingly. Thereafter, the entire class learns a few modules in conventional teacher focused or small group situations. However, the remaining teaching is delivered one-to-one or in very small groups in the form of micro-conferences, coaching, and peer evaluation. The only other teacher-to-class communications are general exhortations to submit tasks outside of class time by email and to allow enough time at the end of the semester to get a high grade.

3.2. Course: Negotiation

This course targets high intermediate and advanced (CEFR B2, A1, and A2) students. The students include a mixture of undergraduate local and exchange students at Kyoto University, Japan. In this course, the students must earn badges in three levels, bronze, silver, and gold in competencies related to negotiation. Badges are a gamification component that provides a target for students to achieve. The educator awards each badge as students indicate their readiness to prove the related skill. Each award indicates incremental student achievement. The badges are not physical; the educator tracks them in a spreadsheet while students track them in their class handouts. Negotiation is a course that is usually taught with emphasis on practice and skills rather than theory. Practice based learning requires repetition and evaluation can be based

on observation. Thus, badges that repeat themes at increasing levels of difficulty were deemed appropriate for training and evaluation. Student grades depend on the number of silver and gold badges earned. In this course, there are several modules that are taught to the group in the form of non-gamified activities including short lectures, peer to peer interactions, and group talks. Further, much of the class time is taken with negotiation simulations and their related preparation and evaluation.

4. Analysis

To determine whether these courses meet the standards discussed previously, the following table displays the presence or absence of various design elements in each course.

Table 2: Gamification achieved?

Design elements	Business English	Negotiation
Points	Yes	No
Leaderboards	No	No
Levels	Yes-one to four	Yes-bronze, silver, gold
Themes	Not explicit	Not explicit
Feedback	Yes-individual at each task	Yes-individual at each task
Progress path	Yes	Yes-bronze, silver, gold
Challenge	Yes-if student is not too highly skilled	Yes-if student is not too highly skilled

Rewards	Yes-grades	Yes-grades
Rules	Yes	Diffuse
Closed system	Yes	Yes
Abstract	No	No
Badges	No	Yes
Affordances	Yes-many tasks require specific behaviors	Yes-many tasks require specific behaviors
Enjoyable	No specific design for this	No specific design for this
Engagement	No specific design for this	No specific design for this
Motivating	No specific design for this	No specific design for this
Measurable outcomes	Yes-competencies proven and measured by badge awards	Yes-competencies proven and measured by badge awards
Serious, gameful, playful	Gameful	Serious
Fun	Not very	Not very

In summary, the courses can be accurately described as gamified. However it is clear that each could be further gamified, particularly in ways that will increase appeal to students. Leaderboards were rejected as a design element as these may be unappreciated and demotivating in a culture where individuals prefer not to stand out, whether for positive or negative reasons. The table above indicates an obvious problem in the lack of fun, and redesign will have to correct this omission.

An additional question is about the advantages and disadvantages garnered by the educator due to gamification of the courses. The tables below systematize the benefits of the two courses in terms of the five achievable goals of gamification mentioned previously: learner outcomes, teacher efficiency, enjoyment, motivation, and engagement.

Table 3: Business English, Educator point of view

Gains made in…	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Learner outcomes				X	
Educator time efficiency					X
Student enjoyment			X		
Student motivation			X		
Student engagement				X	

Table 4: Negotiation, Educator point of view

Gains made in…	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Learner outcomes				X	
Educator time efficiency			X		
Student enjoyment			X		
Student motivation			X		
Student engagement			X		

In summary, the courses provide benefits according to some of the five benefits proposed by the literature on gamification. The analysis makes it clear that these courses warrant additional design to improve or confirm these benefit areas.

Students reacted on a five point Likert scale in order assess their feelings about the gamification features of the Negotiation course, specifically the earning of badges. The statements and their relation to the benefits students may gain are presented in the following table.

Table 5 Student point of view

Likert statement	Gamification benefit area
Badges were distracting to me.	Impact on motivation
It was fun to collect badges.	Impact on enjoyment
Completing three levels of badges made me study carefully.	Impact on engagement
I would have learned more without badges.	Impact on learner outcomes
Getting badges made me learn more.	Impact on learner outcomes
Earning badges was unpleasantly stressful for me.	Impact on motivation

Students responded as follows.

Table 6 Student reactions to badge design element

Likert statement	Positive responses	Negative responses	Neutral responses
Badges were distracting to me.	0	1	2
It was fun to collect badges.	1	1	1
Completing three levels of badges made me study carefully.	2	1	0
I would have learned more without badges.	0	1	2
Getting badges made me learn more.	2	1	0
Earning badges was unpleasantly stressful for me.	NA	1	NA

The above table shows that the student reactions were mixed, however positive reactions outweighed negative reactions. As stated previously, there are too few students in the course, 13 registered regular attendees, to provide analyzable data, and only four of the registered regular attendees answered the

survey. Thus, a descriptive summarizing analysis is appropriate. With four respondents, there were 24 possible answers (positive negative or neutral in each category). The last survey item was added late so two students could not react to resulting in 24 - 2 = 22 possible responses. Of these, twelve were positive, three were negative, and the remainder were neutral. The two items on learner outcomes and the item on engagement all garnered eight out of twelve possible positives, two negatives, and two neutrals. Responses to the reverse worded items did not conflict with each other indicating accurate interpretation by the respondents. All respondents agreed strongly with the statement "I learned how to prepare for a negotiation in this class." These modest results allow no firm conclusions but hint at a generally positive reception by the students.

Students in the Business English course were similarly surveyed regarding motivation and engagement as well as gamification elements such as feedback and a path of progress. All three respondents felt they had sufficient feedback, motivation other than grades, engagement, and a path of progress. The overall response regarding enjoyment and learner outcomes was less clear. These results also allow no firm conclusions but suggest generally positive acceptance by the students.

5. Conclusions

Some conclusions can be drawn from the discussion of gamification and the analysis of the two courses described. Gamification can save teacher time. In the example of the Business English course, the tasks are designed to be easily evaluated – one time listening or a quick visual review and this makes highly efficient use of educator time. However only some of the Negotiation course deliverables can be easily evaluated. Educators in Japan or anywhere are well positioned to gain the benefit of time efficiency through skillful gamification. Table 2 offers a practical tool, a checklist, for applying or rejecting gamification elements to those educators seeking to gamify their educational interactions with students. A further implication for educators is to analyze the gains of the five benefits in any gamification using a version of Tables 3 and 4 above. With the results of such an analysis, the educator can determine which aspects of a course to redesign in order to gain the desired benefits.

Although at least one article reviewed explicitly states that gamification should not be used for assessment (Cheong, Cheong, and Filippou), the gamified courses presented in this study are nonetheless designed for assessment in ways that are transparent for students and the educator. Indeed, measurable outcomes are a gamification element identified in the literature and applied to the two courses reviewed here. On the other hand, game elements that are not apparently necessary include the need for winners and losers, that is to say, all students are

welcome to receive top grades. Further, conflict is neither needed nor encouraged in the gamified courses presented. The only dramatic tension provided in the courses is in the moment of completing a task or earning a badge. Because these are low stakes events, all learners can attempt them anew, removing a source of stress.

Students found the gamified course generally acceptable, however gamification did not clearly energize them. Their comments and survey results will aid improvement of the course in coming cycles.

Gamification seems to be largely missing in Japan at the course and curriculum levels, however a broader survey of teachers and universities would be necessary to establish the penetration of gamification. Gamification appears to be appropriate given the success in reading (Robb) and in commercial educational games and software. In any case, no backlash from students, teachers or institutions is currently apparent. It is the hope of this author that Japan's TEFL educators will explore gamification to their benefit and that of their students.

Some limitations to this paper include the lack of data from students. With the Business English course only 2 years old and the Negotiation course in its first semester, it is too soon to have sufficient data for analysis on student reactions, attitudes to the gamified formats. Formal evaluation of outcomes will

also be necessary. Additionally, student attitudes and needs should be determined through survey and evaluation.

Another limitation is the lack of data from TEFL educators on their gamification experience and interests. This group however is relatively accessible through associations and social media and possibilities for future study are strong.

Looking to the future, gamification has much room to develop in the TEFL landscape of higher education in Japan. Educators are already able to pick from numerous resources as well as the examples in this study. While gamification has been applied to other areas of education as well as to for profit business and training, educators in Japan may still be able to increase the engagement and learning outcomes of students while decreasing their own administrative workload. Gains for all stakeholders remain for the harvesting.

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