

Conference Paper

Gamification Through Genially Enhanced Generation Alpha in-Class Chinese Language Learning Engagement

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ABSTRACT

The 21st Century symbolises rapid digitalisation since The Industrial Revolution (IR) 4.0., remote learning during the pandemic, and innovations towards Society 5.0. China's initiatives in economic development projects around the world impact the higher demand for learning Mandarin. The researchers acknowledged the importance of invigorating Mandarin language learning in light of the 21st century needs. The Chinese as a Foreign Language (CFL) students are Generation Alpha (Gen-A) as digital natives with full digital exposure since early childhood. Further, they have shorter attention spans and prefer learning interactively in chunks. The researcher realises the urgency for maintaining an engaging yet effective lesson with gamification and the importance of learning engagement in developing students' linguistic skills. This qualitative study investigates the enhancement of learning engagement of grade 1 CFL students through the implementation of Genially as the gamification approach. The researchers and parallel teachers periodically noted phenomena during the implementation with field notes. Then, compile and analyse the notes with thematic analysis. The researchers discovered impressive outcomes in students who were behaviourally, affectively, and cognitively engaged. They proactively inquired about the lesson which showed higher curiosity and engagement levels. They exhibited excitement and motivation by voluntarily raising their hands to give responses. Overall, implementing Genially on Gen-A CFL students enhances greater learning engagement in three aspects. The researchers believe this study can be the vantage point for future research and development in foreign language learning other than English.

Keywords: CFL, gamification, Generation Alpha, Genially, IB Curriculum

Introduction

The 21st century marks a great technological leap in the history of mankind. The Industrial Revolution 4.0. started the disruption era with massive digitalization in all aspects of life to provide quick ease of access to resources, and transform the conventional value chain daily to the extent of establishing foundations of the metamodern era (Fonseca, 2018; Skender & Ali, 2019). Subconsciously, such rapid digitalization lays stronger foundations for Society 5.0. with people's dependence on technology. Besides, the COVID-19 pandemic has ultimately sparked innovation in promoting digital inclusivity by considering equal access to technology for everyone - in favor of a more friendly user experience.

Meanwhile, Generation Alpha emerges amidst the disruption and pandemic era with mass digitalization spanning up to 15 years - until 2024 (McCrindle & Fell, 2020). Their characteristics as one of the aspects in learning engagement are technology savvy with greater screen exposure since early childhood, lower attention period, and spend more time with games on gadgets for leisure time which particularly leads them to be visual learners, prefer in-chunk information and socialize through the virtual world (Iberdrola, 2023; McCrindle & Fell, 2020). Consequently, there

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are drawbacks to being a fully digital native generation. Iberdrola (2023) observed that continuous screen time exposure leads this generation with significant concentration reduction due to short bites of information retrieval, less socialization, and endangered creativity skills with fewer hands-on activities. Further, the presence of AI (Artificial Intelligence) apps or sites with their ease of access leads this generation to an AI-dependent life. They prefer to instantly finish any work, find information, and learn anything new with AI instead of engaging with the learning process. The researchers realized the urgency in education to adapt to the dynamicity of the technological revolution and the unique characteristics of Generation Alpha.

Gamification is one of the strategies to enhance learning engagement. Chou (n.d.) viewed gamification as a human-based learning strategy that engages humans' desires to perform certain tasks aligned with the goals. The researchers see the opportunity to apply gamification in enhancing language learning engagement. Gray and DiLoreto (2016) defined learning engagement as a voluntary proactive involvement of the students during the learning process that will improve academic achievements in the long run. It can be inferred that engagement in learning is crucial to students' growth as a whole.

Several studies on the gamification approach in light of its characteristics and effectiveness towards learning engagement have been done. Adams and Du Preez (2022) revealed that the students experience meaningful learning as they care for their learning journey. Kang and Cendana (2022) found gamification as a synergy process between playing, learning, and interacting for a sustainable productive learning environment. Students throughout the lesson got a better understanding and could memorize new concepts along with terminologies. Adelita and Fithriani (2023) found the connection between enhanced learning engagement with significant vocabulary mastery through gamification as an interactive approach. Kang and Recard (2023) found this approach effective as it integrates elements, mechanics, and features {e.g., leaderboards, badges, and instant results with rewards} into the learning experience. Students were excited to explore more questions as they progressed through the quest. The grade 1 CFL students' context as Generation Alpha, they were exposed to the game from early childhood through their gadgets (McCrindle & Fell, 2020). These current studies highlight the positive relationship between the gamification approach and the student's engagement – to the extent of their academic performance. Gamification has proven to be an effective way to enhance learning engagement. It catalyzes augmenting the learning engagement to the extent of greater academic achievement.

The interest in learning a language since the pandemic era has dramatically increased (Straub, 2021). Interestingly, the demand for learning Mandarin has skyrocketed due to China's active economic development initiatives and projects around the world as a superpower country (Nalesnik, n.d.). Sekolah Victory Plus with the IB Curriculum is aware of these phenomena by providing Mandarin Chinese as a foreign language from early childhood (PYP - Primary Years Programme) to secondary level (MYP - Middle Years Programme & DP - Diploma Programme). In light of PYP grade 1 Chinese as a Foreign Language (CFL) students as Generation Alpha in Mandarin subject of this study. The use of CFL term has been frequently used through several research publications (Chan, et al. (2022); Li and Kou (2023); Xu and Stahl (2022)). However, the researchers see the opportunity to provide a novelty in research of teaching primary CFL learners through the implementation of gamification with Genially in Indonesia. The researchers realized the importance of establishing an engaging Mandarin learning atmosphere for them to meaningfully immerse the taught skills and knowledge. Further, the researchers were cognizant of the students' context as they were freshly done from the Early Childhood Education (ECE) year. Meaning, they were in an adjustment period for the first two to three weeks of school.

The researchers found a gap between the grade 1 CFL learning engagement and the expected learning process to reach the Mandarin learning goals effectively. They perceive studying Mandarin as boring, intimidating, and difficult. Also, some of them were found to have longer adjustment times than others with the daily routines. Further, as Generation Alpha students, they

were primarily active in moving around and tended to engage through a visual digital interface and shorter attention spans. Hence, they were easily distracted by their surroundings within a short period. It was a huge challenge for the researchers to establish an effective learning situation whilst ensuring all students could progress at their own pace. Therefore, the researchers dedicated the first two weeks of class to focus on classroom agreement for smooth adjustments to the new environment. Based on the aforementioned issues, the researchers found an urgency in establishing an engaging learning process to ensure meaningful, fun, and productive language learning.

The researchers chose to implement Genially in this study as an interactive platform to hook their learning engagement. It has user-generated content features that researchers can design from the bottom up for the walkthrough (e.g., interactive slides connected to the quests and stages of difficulties based on the subject materials). The students can own their learning process by being actively involved in answering the questions as part of the game's quest. There are unexpected venues with mysterious prizes and difficulties to endure. However, their efforts are being recognized through instant feedback. They are empowered to go the extra mile through immediate prizes from one another venue on a map that will be displayed at the end of the game. The overall user interface gives the students a meaning as an explorer to finish the quests which leads them to immersive learning experiences. Based on the aforementioned background, the researchers aim to investigate the gamification strategy by implementing Genially in enhancing grade 1 CFL students' learning engagement as Generation Alpha.

Methods

Qualitative study is the method applied by the researchers through parallel teachers' observation notes and field notes in recording on-site phenomena during the stages of implementation. The researchers used thematic analysis according to Creswell and Creswell (2018) throughout the four stages for an immersive research experience. Based on Esterberg (2002), the field notes were examined by the researchers to recognize certain patterns for determining essential results later in data analysis.

The researchers captured unique phenomena to recognize certain patterns about the research purpose through field notes. The researchers used the teacher's lead instruction from the get-go to familiarise Genially user interface to students. Then, the researchers let the students experience the walkthrough by themselves in student-paced mode. Whilst observing the implementation, the researchers noted the theories that are related to the ongoing process. Consecutively, the researchers gave verbal feedback to the students. Lastly, the researchers asked the students to share their experiences from Genially activity.

The researchers in collaboration with the parallel Mandarin teachers conducted these steps before data analysis.

1. Record the phenomena in the field notes. Phenomena include students' real-time reactions or responses while participating in Genially.
2. The researchers note some connections between the phenomena and the theory.
3. The parallel Mandarin teachers gave other feedback regarding the implementation of Genially.
4. Informal interviews were conducted before, during, and after the implementation to the students.
5. The researchers analyzed the field notes that include students' informal interviews, and feedback along with quoted theories for the data foundation.

Respondents to the research

The subject of this research is PYP grade 1 CFL students with 3 parallels (1 Pattimura, 1 Fatmawati, and 1 Sudirman) classes. There were 72 students consisting of 1 expatriate from South Korea. Some have a standard proficiency level as they just learned Mandarin during their ECE

year. While some have never learned Mandarin beforehand. Hence, the materials throughout this research will be the basic level of Mandarin.

This research was conducted with an on-site setup from August 7th until 25th, 2023 in collaboration with Mandarin parallel teachers. The CFL students have Mandarin lessons twice a week on Tuesday and Thursday. Each meeting will have a period of 45 minutes in total.

Table 1. The timeline of the research

Date	Research Agenda and Preparation
7th August - 11th August	<ul style="list-style-type: none"> ✓ Plan the lesson layout. ✓ Tuning in a Mandarin Lesson. ✓ Learning language skills. ✓ Observing classroom
14th August - 24th August	<ul style="list-style-type: none"> ✓ Enrichment of the student's language skills. ✓ Preparing to make the Genially accessible and easy to operate for grade 1 students. ✓ Train students' skills to operate the device. ✓ Using gamification in Genially (Genially Land) as their review of the lesson tools.

Instruments

Observation notes from parallel teachers

The observation notes from the parallel teachers are vital in recognizing the benefits and downsides of Genially activity. The purpose is to gain extensive observation results on the students' progressive participation before and after implementation.

Field notes

Written by the researcher to serve as qualitative notes for the continuing deployment of the gamification strategy. The purpose is to collect real-time data before and after the implementation. There are several components in the notes such as the classroom environment, the context of the lesson with the kids, and the comment on the adoption of gamification.

Data analysis techniques

The researchers descriptively analyzed the phenomena from field notes and parallel teachers' observation notes. The gathered data will be classified based on the theories and purpose of the research (Creswell & Creswell, 2018). Then, the grouped real-time results based on the research framework will be analyzed in light of the research findings and scope to answer the aforementioned problems. (Esterberg, 2002). Therefore, the researchers will obtain an in-depth data foundation and breadth of feedback from multiple perspectives.

Results and Discussion

Sekolah Victory Plus IB World School is cognizant of the need for a down-to-earth and up-to-date pedagogical strategy in answering the challenges of the 21st Century (Fonseca, 2018; Skender & Ali, 2019). Furthermore, the demand for learning new languages has grown significantly since the pandemic along the need for Mandarin language has greatly increased due to China's leading initiatives (Straub, 2021; Nalesnik, n.d.). Also, consider the characteristics of Generation Alpha as digital natives with shorter attention spans and greater screen exposure (McCrindle & Fell, 2020). Their engagement in learning is crucial. Gray and DiLoreto (2016) believe that learning engagement is when students are proactively engaged which will impact their learning in the long run. Further, Chou (n.d.) found the foundational concept of gamification as a human-based

learning strategy to perform certain tasks. The students still learn the materials while having immersive in-game experiences. Hence, the researchers decided to implement Genially as one of the gamification methods to investigate its effectiveness in solving the aforementioned issues.

The researchers and Mandarin parallel teachers collaborated in planning the layout, materials, objective, and activity of the lesson based on the CFL's background as Gen-A. The lesson was about 汉语拼音 *hànyǔ pīnyīn* and several new words 生词 *shēngcí* such as (爸爸 *bàba*、妈妈 *māma*、老师 *lǎoshī*、爱 *ài*、我 *wǒ*) phonetically. Before implementation, the researchers conducted hands-on activities in the first 20-25 minutes to understand basic Mandarin. The researchers implemented Genially during the intermittent period (minutes 20-25). While implementing Genially, the researchers and Mandarin parallel teachers took notes on the phenomena.

During the implementation of GeniallyLand mode in Genially, the researchers noted interesting phenomena such as consecutive discussions with self-inquiry amongst teachers-students and students-students. This mode situated the students are delighting in some carnival games.



Figure 1. Genially user-interface

One of the students defended her answer, *"It's not that 'a' with this symbol. That's one! That's the 'a' with the right tone symbol!"*. The researchers noted some of them made a love-shaped hand gesture whilst answering the question verbally (e.g., *ài* - love, *bàba* - father, etc.). Such phenomena showed ownership in learning by actively contributing through any medium possible (verbal & movements).



Figure 2. The Question's interface is based on the aforementioned phenomena

Genially gave a sense of ownership where the grade 1 CFL students saw a map at first before continuing to the first carnival venue. The map gave meaning to the students as an explorer with adventurous yet exciting journeys. Especially with the red skull picture at the end of the road. Furthermore, they saw silhouettes of figures below as their awards to obtain. Particularly, this gives them a sense of empowerment to finish the journey at their own pace with eyes on the prizes. Students got more engaged with the intriguing unpredictable challenges they will face in each venue. Each picture on the GeniallyLand map gave a bit of foreshadowing difficulties yet fun. Unconsciously, the overall interface of the GeniallyLand map with the aforementioned features will gear the students to have a sense of accomplishment with higher motivation at the end of the game. The aforementioned features are related to the discussion from Kang and Recard (2023) where gaming elements will bring a greater learning experience; even from the beginning.



Figure 3. Genially land map user interface

The students also received a doll after finishing several questions in each venue – just like in a real carnival game. Particularly, the doll gives a sense of ownership to the students both individually and as a class after coming up with an agreement on the correct answer. Such immersive in-game learning experience brings the grade 1 CFL students to meaningfully understand the learned concept in Mandarin. This relates to the findings from Adams and Du Preez (2022) where gamification leads the students to care for their learning progress.

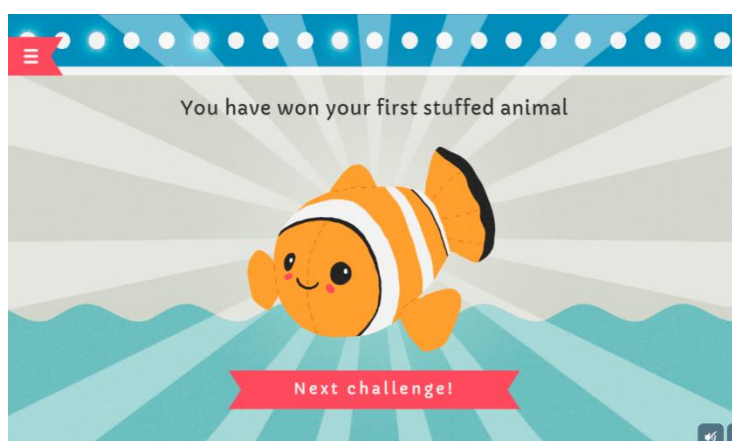


Figure 4. A doll as a prize after finishing the venue's mission

This approach is related to inquiry-based learning within the IB curriculum framework such as questioning the meaning of a particular word while wondering about the answer, defending

and clarifying one's answer/perception, and recalling previous learning. For applying this in lower grade primary school especially grade 1, with the students who just face appropriate gamification meaningful and engaging all of the students, there are no single students who lost in the classroom or playing by themselves. This result is happening in all three parallel grade 1 of Sekolah Victory Plus.

The researchers noticed the excitement from the grade 1 CFL students in using Genially. Hence, the researchers gave another session for students to experience GeniallyLand by themselves. One of the researchers said, “你要自己试一试这个游戏吗？*nǐ yào zìjǐ shì yī shì zhège yóuxì ma*” and all of them wanted to experience it by answering their best both in English and Mandarin. “Yes, I want to!” “要 *yào*”. Some students expressed their excitement by cheering up by waving their hands in the air and nodding with smiles. The researchers demonstrated again the scanning procedure for the projected QR code on the screen with the students' devices to ensure a smooth transition. The researchers found out that this approach is effective in avoiding disruptive classes in a quick flow.



Figure 5. Questions to solve

The grade 1 CFL students were completely engaged in the learning experience while accessing and playing GeniallyLand. High-achiever students finished the game first and demanded a new mode. Whilst others kept replaying the game even though they were finished with some others were unable to finish the game due to limitations in their device specifications, Wi-Fi connection, and time.

The researchers noticed the students showed engagement by giggling, frowning, and other expressions depending on the answers they got. The situation was less crowded yet productive as the students received dolls after finishing each venue individually. Some students expressed more satisfaction as they finished the journey alone regardless of the teacher's guide and discussion with others. This exhibits a sense of empowerment from implementing the GeniallyLand to grade 1 CFL students.

Uniquely, some grade 1 CFL students had GeniallyLand in peers and small groups as the researchers gave agency to them. The researchers noted some students scaffolded their friends who were struggling to understand the question through small discussions. They recited the learned vocabulary from the game. This exhibits a caring and communicative atmosphere in implementing gamification. Specifically, such phenomena are related to Kang and Cendana (2022) where gamification can augment students' interest and even greater in helping others in need to understand the lesson. In the end, no students were left behind and disengaged. This connects with the findings from Adelita & Fithriani (2023) on how learning engagement brings significant vocabulary mastery. Even more during the implementation, the in-game discussions bring a back-to-back thinking process to enhance vocabulary development for both students. The researchers noticed the characteristics of Generation Alpha as well as from other teachers' notes as visual learners with short attention spans (McCrindle & Fell, 2020; Iberdrola, 2023).

The researchers along with the Mandarin parallel teachers agreed that the implementation of GeniallyLand as a gamification approach has successfully engaged the students. Behaviourally, the students discussed with others both in peers and small groups as a means of scaffolding. Further, the students show the argument, defend their answer, correct their peers and at the moment realise their answer is wrong or correct. It can be inferred that they were also cognitively and affectively engaged. The researchers noted different traits of the students as communicators and caring people in dealing with the dynamicity of GeniallyLand.

According to the researcher's field notes and Mandarin parallel teachers' observation notes. Genially was implemented in grade 1 Pattimura, Fatmawati, and Sudirman. During the first session, students in all classes actively participated in discussions during the implementation of Genially. The environment of the classroom was conducive and productive. There was a crowd and also active participation. Interestingly, students were eager to try the game on their own instead of asking the teacher's help. It can be concluded that students were engaged academically and behaviourally by implementing this approach.

In the second session of Genially implementation, the researchers applied a modified situation. Students were seated in pairs. Students were discussed actively with peers whilst completing their Genially. They actively participated by helping each other to give the right answers. Most of them want to try another Genially mode to learn more about the vocabulary in Mandarin. The second session provided evidence of how this implementation catalyzes language learning.

Conclusion

The implementation of Genially proved the effective outcomes of the gamification approach in enhancing grade 1 CFL students' learning engagement. Students were engaged behaviourally, affectively, and cognitively to the extent of establishing equity in the learning process. The gathered data from the researchers along with a Mandarin parallel teacher found the students were immersed in the learning process. The students found it easier to memorize the vocabulary despite their background without extensive Mandarin exposure. Such an approach was effective for teaching Generation Alpha as visual digital learners with a short attention span. It can be inferred that gamification through the use of Genially in Mandarin subject leads to a productive, immersive, and meaningful, yet fun. The aforementioned phenomena have addressed the objectives of the research. Also, proved the effectiveness of this novel approach by other researchers in the corresponding schools or learning institutions.

The researchers noticed that the teacher's role in classroom management is also related to the effectiveness of this method. Especially, in teaching grade 1 CFL students. The students experienced such an engaging learning atmosphere in their first year as PYP students. The applied method showed the students' growing interest in learning Mandarin. It is recommended that the mode and approach of teaching be adjusted accordingly to avoid boredom of the students. Essentially, without neglecting the learning goals for students' greater language development.

Furthermore, consideration of the balance of digital and hands-on activities should be the priority in achieving meaningful and productive learning. Giving the students agency in answering the answers with peers or small groups can give greater outcomes than the regular gamification approach. The researchers recommended that this study be the pioneer in the gamification approach with the enhancement of students' learning engagement for a foreign language other than English. In the future, others can try to focus on different modes of Genially and how it might affect different levels of engagement of the students.

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