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GAMIFICATION: USER ENGAGEMENT IN ONLINE PLATFORMS

Bachelor's thesis

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I declare that I have compiled the paper independently

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ABSTRACT

The Web 3.0 is an interactive medium and evolving in learning, and social interaction, the purpose of this research is to establish knowledge on the influence of the use of "gamification" online. The author researched gamification and its contribution to motivation and user engagement in online platforms.

Two study methods were adopted for this study. Qualitative and quantitative methods by way of Netnography and survey were carried out. It is imperative to explore the role of gamification – the use of game mechanics and element in a non-game framework, in allowing user engagement.

Gamification as a significant motivation for user engagement and user's motivation and interaction is essential to achieving desired objectives. Institutes of higher learning and tutors will achieve desired goals incorporating gamification elements to course modules. The users of online platforms are discovering a whole new way of finding out about products and services that will enhance knowledge and create better career opportunities, which includes products, services, online applications, etc. These are media tools to encourage active participation and reward using gamification.

Countless research methods materials provide recommendations on research design and analysis but fail to specify variants and themes for new researchers. Also, options offered may not be applicable due to evolving trends, and this hinders decisions in developing the right questions, and limited direction in data analysis and presentation.

Keywords Gamification, User engagement, Motivation, Online platforms

Abbreviations: CEGE: Core Element of the Gaming Experience

MDA: Mechanics-Dynamics-Aesthetics

SDT: Self-Determination Theory

INTRODUCTION

As internet activities evolve, known to be a central channel for reaching out to users, online user engagement has been a subject researcher, engineers and marketing experts are seeking ways to improve. Gamification has also emerged as a way if increasing interaction with the combination of game elements in non-gaming activities. Gamification as one of the tools of marketing communication requires efficient means of interacting with users as they play an essential role in the success of such campaign. Hence, the purpose of this study is to establish knowledge on the influence of the use of “gamification” online.

The goal of user engagement is to increase participation by users. And the use of gamification as a catalyst for engagement, will serve the web and indeed online medium in becoming a practical tool applicable for an extended period. Therefore, the aim of this study focuses extensively on how gamification increases user engagement in online platforms.

The expression “gamification” relates to the combination of game elements and non-gaming activity. Gamification has so far developed and successfully used in achieving improvement in enormous challenges. Examples include employee productivity, social relevance, marketing and data gathering, etc. Studies have shown gaming elements are used as an engagement tool to encourage participation. Moreover, while gamification has been studied extensively in different context, little scientific interest is yet to show the influence of gamification on user engagement. The reason the author has chosen this topic is in anticipation of gaining valuable insight to the benefits and limitations to the use of gamification in social interaction and acquiring knowledge on relatively new and untapped areas of achieving a higher level of engagement via online platforms.

The literature related to the emerging concept of gamification remains mostly conceptual. Empirical studies analysing the effects of gamification on engagement is limited viz-a-viz awareness on gamification is relatively a new phenomenon, which is gradually gaining popularity in the last couple of years. In understanding users concerns, the following questions are addressed:

RQ1: What are the types of game element used in online gamified platforms?

RQ2: How game dynamics and design mechanics translate to active user engagement?

The research questions answered by adopting two study methods: qualitative and quantitative methods. Literature review and content analysis conducted on gamified websites. Related literature supporting the user motivation and engagement is analysed. The theoretical background will set in motion topics on the use of gamification elements, motivating factors as it affects users and measures to achieving high user engagement.

This thesis shall take the following forms: Chapter one introduces the theoretical backgrounds on the concept of user engagement, online behaviour and gamification online by illustrating based on scientific evidence that relay them to be applied to this research. It sets a precedence for the empirical research as well. The first section presents related literature that will set a scope for answering questions raised. Chapter two is the research methodology parameters. It highlights the choice of research methodology, research design, sample procedure & description, followed by data collection & analysis with respective instruments and parameters of measurements. Chapter three, the empirical part present results of observations on six online platforms, discussions, comparison of the theoretical framework, conclusion, proposals and recommendations.

In all, I am sincerely thankful for the support of my thesis supervisor, Professor Iivi Riivits-Arkonsuo, for her willingness, patience and generosity with a wealth of knowledge towards this project.

1. THEORETICAL BACKGROUND

This chapter introduces the theoretical backgrounds on the concept of customer engagement, user experience and gamification by illustrating based on scientific evidence that relay them to be applied to this study. It sets a precedence for the empirical research as well. The first section presents related literature on the concept of user engagement, online behaviour and gamification that will set a general scope for answering questions raised and tasks in finding seasoned answers to the questions.

1.1. Concept of User engagement

User engagement is defined as "the level of a user's physical, cognitive, and emotional presence in their relationship with service organisation" (Patterson et al., 2006). In conceptualising the basis of user engagement, there are widely accepted and under-laying inner domain of association with relational marketing theory (Harwood & Garry, 2015), (Vivek, Beatty, & Morgan, 2012). However, most of the literature in relational marketing focuses on the existing user behaviour considered to be reflective of the positive motivation.

Marketing experts have made efforts to define user engagement. However two main currents try to explain this phenomenon, there are those who approach the subject from the psychological point of view and others from the business perspective. Now, it is important to emphasise that as the user engagement is a human behaviour influenced by environmental factors, but also in this study, the concept analysed from a marketing standpoint, we come to a point in common, both branches start from a social base.

The user engagement concept is mostly considered important in generating an understanding of interactions between firms and customers (Breidbach *et al*., 2014). Reflecting such interactions, Brodie et al., (2013) empirical research suggests several sub-processes and consequences relevant to engagement. Sub-processes include "learning", "sharing", "advocating", "socialising" and "co-

developing". Consequences of such engagement encompass "loyalty and satisfaction", "empowerment", "connection and emotional bonds" and "trust and commitment". However, further evidence suggests varying effects resulting from the different dimensions of such engagement. In particularly those manifesting online, such as verbal communication and observation, group flow, organic and amplified exchanges (Verhoef et al., 2010; Libai et al., 2010; (Harwood & Garry, 2015).

There exists a emerging consensus within the literature (Ramaswamy, 2009; Payne *et al.,* 2008; Brodie et al., 2013), that recognizes the imperative of providing effective engagement platforms, that facilitate user motivation through information exchange and interaction or indeed through "engagement ecosystems" that cross multiple platforms (Baron & Warnaby, 2011). In solving the challenge of directly engaging with users, firms can only achieve this through non-transactional mechanisms that will influence and manage user engagement behaviour (Jaakkola & Alexander, 2014).

According to Verleye et al., (2014), Non-transactional elements identified previously include referral rewards, new product and services development platforms and communities. These may prompt diverse types of behavioural responses both from a user-to-firm and user-to-user perspective. E.g., feedbacks, compliance with the companies' procedures, assisting other customers and word-of-mouth activity.

Hailed as a "new industrial revolution driven by play" (Dibbell, 2007), game-based incentivised mechanisms, or "gamification", has seen substantial growth in its application across industry sectors in recent years. With an estimated 70% of Global 2000 organisations having at least one gamified application (Gartner, 2011). Current organisational adopters include Microsoft, Samsung, NikePlus, Alfa Romeo, Facebook, Audi, McDonalds and Foursquare. The key propeller of "gamification" is to incentivise customers in the gamification experience environment to exhibit behaviours and feel emotions like gameplay. Hence, to fully appreciate the gamification concept, it is important to the review broader user experience literature from which the phenomenon is applied.

1.2. Online behaviour

The study of online behaviour is a significant part of understanding the user motivation in Web 3.0. (Ajzen, 2002) Proposed a model on decision-making in his theory of planned behaviour, self-efficacy, the locus of control and perceived behavioural control. These well-known models explain factors that users usually take into consideration before they display a specific pattern of behaviour. "online consumer decision-making from a proposed web-based communication exposure and internal psychological behaviour processes approach suggests that consumer decision-making should be conceptualised regarding web-based communication message exposure and information processing." (p. 85).

Furthermore, (Ajzen, 1991) decision-making model explain factors product users take into consideration before interest shown towards a product or service. 1) Attitude – positive and negative assessments of the service, validation of personal implications. 2) Subjective norm - (p. 188) measured as "normative belief without including motivation to comply" which means what users believe in the environment regarding the expectation of to, or not to comply with these norms. 3) Perceived control – belief that self-has control over personal behaviour, feelings, activities in one's circle or people. Altogether, the above factors sum intent to engage on a platform or use of any product and service.

"There is evidence from analysis to suggest that engagement is achieved at a behavioural level, manifesting in the performance and completion of tasks, collection of points, badges and some rewards." Where game tasks are locked-in with existing interaction via web pages, it generates increased user engagement (Harwood & Garry, 2015). Also, Harwood & Gary noted that lack of positive communication between service providers and users could be exhausting given the length of time it takes for users to adapt to the platform. It causes subversion to game mechanics as a possible outcome. However, such aspects are underexplored regarding background literature, and there is a need for further studies of this phenomena. In general, the study of online behaviour and interaction is relevant in understanding how game elements in addition to online user behaviour propel motivation.

1.3. Gamification

The introduction of modern technology (Web 3.0) to a more active role for users in the value chain of events. Though this phenomenon has been existing for some time, trends in recent years show reasonable interest over time (see Fig 1). It has since been a subject of research and development in the recent years. According to (Deterding, Dixon, Khaled, & Nackle, 2011), as "gamification" not limited in term of its use and application, little academic attention has been paid to a definition of the "gamification" concept (Huotari & Hamari, 2012).

(Deterding *et al.*, 2011) Defined gamification as "the use of game design elements in a non-game context". Deterding et al., believed indeed that "gamification" separate a distinct but previously unspecified group of phenomena such as the complex of gamefulness, gameful interaction and design, etc. Invariably, meaning that gamification and gaming mechanics are used in non-game systems. Similarly, DomíNguez et al., (2013) described gamification as incorporating game elements into the non-gaming software application to increase user experience and engagement. However, (Huotari & Hamari, 2012) defined gamification from a service marketing point of view as "a form of service packaging where a core service is enhanced by a rules-based service system that provides feedback and interaction mechanisms to the user with an aim to facilitate and support the users' overall value creation". A general definition of gamification identifies it as "the process of adding game mechanics to process, programs and platforms that would not traditionally use such concepts" (Swan, 2012 pp.13).

Figure 1 Gamification Worldwide
Source: Google trends. Interest in "gamification" in the last ten years.

Furthermore, the author shows literature background to gamification as serious games. Susi et al., (2007) describe serious games "as digital games for the purpose other than mere entertainment", and it should motivate and engage the player who will trigger that development of extensive set skills and abilities (Susi, Tarja, & Backlund, 2007). This definition matches the definition by Michael & Chen as "games that do not have entertainment, enjoyment, or fun as their primary purpose" (Michael & Chen, 2005) (Kartevoll, Wang, & Alsos, 2017). Gamification is gaming in some sense, meaning integrating game mechanics with the game design while serious games are gaming in its entirety, that is, the design is full-fledged games for non-entertainment purposes (Schreiber & Brathwaite, 2008). According to Reeves & Read a set of ten elements were identified from great (entertaining) games (Reeves & Read, 2013). These components are; self-representative (avatar), three-dimensional environments, narrative context, feedback, reputations, ranks, and levels, marketplaces and economies, competition under rules that are explicit and enforced, teams, parallel communication are systems that easily configured, and time pressure. Although these ingredients might be the critical elements in a great recipe, Reeves & Read indicates that they are not a final solution which works in every game and that without the precise treatment they can fail miserably (Reeves & Read, 2013). Serious games are mainly about leveraging on the power computer games must captivate and engage end users for a specific purpose including user engagement, skills and knowledge (Kevin, 2010). Serious games apply to the military, government, learning, networking, corporate, healthcare, etc. (Susi, et at., 2007, Michael & Chen, 2005, Kartevoll, et al., 2017, Kevin, 2010).

Game elements by Crawford, (2003) define as "any given elements that reflects the purpose, interactivity, competitors, goals and allows for attack". Although the actual elements remain unknown, Deterding et al., (2011) suggested that the social elements and representation plays a key role in the characterisation of the game elements. Reeves and Read, (2013) identified ten ingredients of a game: Self-representation with avatar, 3D environment, narrative context, feedback, reputation, ranks and levels, marketplace and economies, competition under rules that are explicit and enforced, teams, parallel communication that can easily configure and time. "Each of these elements is found outside of games, and taken in isolation; none would be identified as 'gameful', let alone game specific." Deterding et al., (2011).

A framework proposed by Hunicke, LeBlanc & Zubek, (2004) in assessing games comprises of three elements namely: mechanics, dynamics and aesthetics known as the MDA model – "suggests that designers work with mechanics to create aesthetics". These components refer "to the actions, behaviours and control mechanisms that are available for players". An example by the authors is the mechanics in card games, which includes shuffling, trick-taking and betting. Dynamics on the flip side may emerge from the mechanics. Referring to the card games again, the authors state that from the card game mechanics, a game dynamic of bluffing may emerge. A related example as given by the authors is the shooting games, where mechanics include weapons, ammunition and spawn points, whereas dynamics of camping and sniping may emerge. In clarity, (p. 2) the dynamics component "describes the run-time behaviour of the mechanics acting on player inputs and each other's output over time".

The aesthetics component in the MDA framework (Hunicke et al., 2004) comprises of all things that make game "fun". Aesthetics "describes the desirable emotional responses induced in the player, when they interact with the game system". Aesthetics includes but not limited to (1) sensation – "game as sense-pleasure" 2) fantasy – "game as make-believe" 3) narrative – "game as drama" 4) challenge – "game as obstacle course" 4) fellowship – "game as social framework" 5) discovery – "game as uncharted territory" 6) expression – "game as self-discovery" 7) submission – "game as pastime". A distinction between game mechanics and game dynamics is in Bunchball's paper "Gamification 101". Bunchball, (2010) noted in the paper; game mechanics are actions, process and control mechanism why dynamics are compelling desires and motivations. Bunchball gave examples of game mechanics which include but not limited to: points, levels, quiz, leaderboard, unlocks, progress, notification, virtual goods and badges. Similarly, examples of game dynamics include and are also not limited to: achievement, competition, collaboration, collection, community, surprise, gifts and exploration.

Game mechanics are tools and techniques available for action, behaviour and control in a game context that is at the disposal of the player (Hunicke et al., 2004). (Table 1.) Explains the main elements of game mechanics. As listed in the earlier section (game element above), game mechanics drive participation and engagement by their integration into website, service, content portal, marketing campaign and online community. Others include an internal business workflow

for organisations, especially customer service specialist. Muntean, (2011) corroborated similar list of a game mechanic, but Bunchball, (2010) listed more in the latest white paper release in 2016 to include blissful productivity, bonuses, discovery, ownership, status, etc.

Table 1. Game mechanics explained.

Game mechanics	Explanation
Points	Points are rewards in numerical values used to drive specific behaviour. They are used as status indicators, unlock access to content and serves as gains for user motivation.
Levels	An indicator of milestone achievement, accomplishment, and ascribed certain amount of respect and status. Levels are point's upper-limit so that users can move to the next level based on participation.
Challenges	Challenges offer users with missions to be accomplished and reward them for doing so. Trophies, badge, ribbons, etc. are awarded for completing a challenge
Virtual Goods	These are intangible objects that can be purchased for use in online communities. Users buy virtual goods like weapons or decorations to create a virtual identity to show off to the community and friends.
Leaderboards	Leaderboards are used to display and keep track of desired actions. It shows leaders by category to provide motivation.
Gifts and charity	Users with the highest score win a reward while others may get consolation prizes.

Source: (Bunchball Inc., 2010), As compiled by author

Game dynamics are part of game elements that satisfy human desires (Bunchball, 2010; Urh et al., 2015). These set of desires are universally encompassing across gender, culture, creed, generations and demography. Game dynamics also serve as elements of game designers have used in addressing strategic needs around the gaming world, and gamification has now allowed for more broad application by injecting this element into apps, websites and platforms to create satisfying user engagement. (Table 2.) below explains main elements of game dynamics.

Table 2. Game dynamics explained

Game dynamics	Explanation
Reward	Something of value given for an action. Rewards are presented to encourage the re-occurrence of user behaviour.
Status	Humans get driven by status, recognition, fame, attention, respect from others, and all elements of game mechanics drive these dynamics.
Achievement	Users often driven by the need to accomplish through moderately tough goals have motivated the reward for an achievement.
Self-expression	Users seek the opportunity to express their personality, with the use of an avatar and virtual goods, they can create an expression for themselves.
Competition	The user gains satisfaction by comparing performance with others.
Altruism	Gamification makes gifting a powerful for retention and fosters relationship in a community.

Source: (Bunchball, 2010), as compiled by the author.

Game design for optimal user engagement requires an understanding of the user's broad view on gamification. It entails user expectation, consideration of motivation and environment that will be used to ensure it capture a broad-based user. The user is a key consideration in the design process and this requires obtaining feedback and working actively with users to ensure the out leads in the right direction. Game design for gamification does come with relative ease using instant

gamification service provider like Badgeville and Bunchball. Their “single solution to fit” all approach with varying design elements such as monetary and point rewards for organisations that would like to use same approach. However, this creates game design problem that may not cater to the objective of some campaigns and loses the fun to play game application. (Hiltbrand & Burke, 2011), highlighted the many current gamification attempts are merely duplicated applications meaning, context copied without customisation of design elements in consideration of the specifics purpose and desired outcome. Game design is a never-ending activity that must be interactive with the user. It is imperative that this activity is kept throughout the project and not limited to the beginning phase. (ISO DIS, 2009; (Maguire, 2013)

Deterding et al., (2011) in addition to game elements, included game design in their definition, as “design concepts often are found in games”. They mentioned that the relationship between serious games and gamification are not that far away from each other. Serious games can be training games, health games, or news-games, there can likewise be gamified design for training, health, or news, as well as other areas (Deterding et al., 2011). In their literature review they found varies design elements which were categorised in a set of various levels of abstraction (see Table. 1). These levels included in their final definition where gamification refers to "the use, rather than the extension, of design, rather than game-based technology, or other game-related practices, elements. Rather than complete games, characteristics of games, rather than play or playfulness, in non-game contexts, regardless of specific usage intentions, contexts, or media of implementation.

It is essential that game design does not put much emphasis on designs rather, it should focus on user engagement. Design team members should be heterogeneous to allow for consideration of different views in the design process. A lot of issues detected are neglected in the process (ISO DIS, 2009).

Table 3. Levels of Game Design elements

Level	Description	Example
Game interface design patterns	Common, successful interaction design components and design solutions for a known problem in a context, including prototypical implementations	"Leaderboard, Badge, level."
Game design patterns and mechanics	Commonly reoccurring parts of the design of a game that concern gameplay	Time constraint, limited resources, turns
"Game design principles and heuristics."	Evaluative guidelines to approach a design problem or analyse a given design solution	Enduring play, clear goals, a variety of game styles
"Game models."	Conceptual models of the components of games or game experience	MDA; fantasy, challenge curiosity; game design atoms; CEGE
"Game design methods"	Game design-specific practices and processes	Playtesting, playcentric design, value conscious game design

Source: (Deterding, Dixon, Khaled, & Nackle, 2011). Design elements with varying level of definitions giving a firm construct to the peculiarity of game design.

As gamification is not entirely new feature, the concept keeps evolving and focus by series of research is drawn to its effects. Gamification can achieve higher participation in several areas as online multiplayer games commonly used by persons (Bossomaier, 2015). Hakulinen et al. performed a quantitative study of some student studying computer science and established that badges have low or no effect. "The behaviour change of the students was negligible, however; a small fraction showed behaviour". The design and correct use of "gamification" are important. It is also important to note badges given served as a motivator towards learning and had no impact on the final grade obtainable for the course (Kartevoll, Wang, & Alsos, 2017)

1.4. Gamification as a marketing tool

Gamification practically, has been applied to various platforms such as e-commerce (Insley & Nunan, 2014), Human resource management (Farzan & Brusilovsky, 2011), and others such as marketing research, data gathering, digital marketing, etc. “The goal of gamification is to “support the user’s overall value creation by providing gameful experience” (Kamari & Koivisto, 2013)p. 3. According to Deterding et al., (2011), “Gamification may easily be confused for serious games, which are games made for non-entertainment purposes”. In all its features, “gamification” bears the resemblance with more traditional marketing tools, such as customer loyalty stamps cards, leading to businesses considering their marketing more like games (Hamari & Eranti, Framework for designing and evaluating game achievements, 2011).

“Gamification” is said to be a connector of two ends. In context, the user(customer) and the game designer (brand, company, product or service). The objective of the game designer is position itself and its activities such that it triggers and induced customer behaviour in favour of the company (Zichermann & Linder, 2013). According to (Huotari & Hamari, 2012), the focus on user perspective is service based. That is, enhancing service with affordability for gameful experience in turn for users’ overall value creation. Therefore, “a gamified service design reflects the user’s lived experience during service consumption”.

Combining user and designer perspectives, Robson et al. (2015) suggest that gamification practices can be better understood through the mechanics, dynamics, and emotions framework, which was adapted from the game design literature (Hunicke et al., 2004). Mechanics refer to goals, rules, settings, types of relations, and the confines of the situation to be gamified. These fundamentals depend exclusively on designers’ decisions and do not vary across participants or time (Robson et al., 2015). Dynamics are behaviours and interactions that emerge from customers’ gamified experience (Camerer, 2003). They encompass both desired (e.g. collaboration among participants, engagement, or compliance) and unintentional behaviours (e.g. cheating, overuse) (Elverdam & Aarseth, 2007). Conclusively, emotional mechanisms include the positive and negative emotional states induced by game play (Robson et al., 2015).

1.5. Gamification platforms

Facebook founded in 2004, known to be the largest social networking platform with 2.13 billion monthly, (Facebook, 2018). The mission of Facebook is "to give people the power to build community and bring the world together". Facebook involved signing up, which makes it possible to connect with friends, families, groups, etc. To sign-up, a user is required to fill out First name and last name, e-mail, a user password, date of birth and sex. Providing these basic details is required according to Facebook's data policy. Secondly, the user will have to provide additional data including current city, education, occupation, relationship. The user is also required to upload a profile picture. In the user's profile page, there are quiz questions that Facebook thinks "answering a question will help people get to know you".

Users can as well create groups and pages that can either be "closed" or "open" to everyone. On the home page there, there are seven icons on the blue strip that displays profile picture with first name, "home", friends request, messenger, notification, quick help and a drop-down icon that displays nine other prompts. On profile timeline, the number of friends the user is displayed, and it is possible for the user to show or hide their friends list if they so please from the view of the public. The main activities of users on Facebook include profile updates, sharing photos, links, videos and commenting on friends and groups' timeline. Users' friends see every activity, and there is a numerical count of each of the activity and post. User can also like feeds that do not post on Facebook but have incorporated "like", "comment" and "share" features on their website. It is also possible to "mention" and "tag" a friend so they could see a post. There exist features that allow users create chat groups and discuss with friends, they don't have to be friends to be a member of a chat group, and it does not matter if any member is on or offline.

LinkedIn officially launched in 2003, is "the world's largest professional network with more than 546 million active users worldwide" (LinkedIn, 2018). The user upload a profile picture, level of education with qualification obtained, career experiences, skill & endorsements, accomplishments and interests. Maintaining an updated profile is key on LinkedIn because it is also a platform for employers who are scouting for experts who will match with the responsibility they seek. Users on LinkedIn form professional connections with influencers, other professionals and companies.

The users on LinkedIn form a "connection", and the connections are in categorised into "degrees" based on how closely related they are to users. The "1st-degree" connections are a user who is closely related to each other by alumni group of an institution, e-mailing contacts, phone contacts, colleagues, etc. The "2nd-degree" connections are users known to the first-degree connections. And the "3rd-degree" connections are users who are known to the second-degree connections. Users also have a dashboard which is private on the user's profile page. Also, it is possible to endorse other users in a listed set of skills on their profile. The first-degree connection gets to endorse other users, and as many endorsements each user get for listed skills, they are automatically re-arranged according to the highest number of endorsements on the user's profile. LinkedIn has a free upgrade to a premium package for 30 days amongst many other subscription plans. Users can choose between premium package so desire.

Vocabulary is a web-based learning platform. It helps the user to develop mastery in use of vocabulary. To sign-on, user provides the date of birth, first name, last name, email address, password and a pictured word is entered to get started. The science behind the application is a "sophisticated algorithms to help the user learn over 14,000 words more effectively". Vocabulary.com believes "expanding vocabulary does not have to be a brain-buster". Vocabulary involves accumulating points, achievements and badges while competing with other users on the platform.

Yahoo Answers by Yahoo! is a "platform where users ask each other questions on topics and get answers by sharing facts, opinions, and individual experiences". (Yahoo!, 2018), encourage participation and reward great answers with points and levels. "The number of points earned is reliant on on the specific action is taken and points cannot exchange for anything, they do allow everyone to recognise how active and helpful users have been as well as something to brag about with friends". There is three distinct way of participating on Yahoo! Answers include asking, answer and discover. Yahoo! Answers just like any other platform have terms of service and policies guiding users. As an "online community in which participants ask and answer questions on wide range of topics, from the serious to the delightful insignificant. Gamification plays a significant part in encouraging users to comply with strict guidelines. These guidelines are to help the user do their part in making the online community a safe and enriching place". Guidelines are

of two types, Good - Courteousness, good citizen, ask clearly, categorise correctly; Bad – Venting, ranting or hate speech, chatting or violation of question-and-answer format, exploiting the community, cheating, violating the law, behaving maliciously, etc.

Kahoot launched in 2013, with the motive of providing learning solution to classrooms but later grew beyond that to span into sports, cultural events, business training and another social learning context. Kahoot is "a game-based platform that creates an emotional, playful, engaging and social environment". Its mission is to "unlock the deepest potential of each learner, of all ages and in all tasks, and we do that by making learning fun, magical, inclusive, engaging and shareable through games". Kahoot is all about unlocking user's potential which means making a poor performing student a superhero by engaging with games (Kahoot!, 2018). Playing Kahoot requires a moderator when played in a classroom. All users must possess an internet-enabled device to be able to participate. It consists of multiple-choice quizzes projected on a screen by the tutor. Students are not required to sign on to Kahoot when participating in class, all they must do is to go on the web-page, input the game pin for the quiz as given by the instructor, a name is required as well, but students may decide to use a nickname which will show on the screen.

Nike and Apple revealed **NikePlus** platform, wireless equipment to connect Nike running shoes and Apple iPod music player. In 2012, Nike launched its gamified application, and since then, it became a popular platform for runners (Poornikoo, 2014). NikePlus gamified device tracks and monitor user's every day based on the difficulty chosen by the user. NikePlus is used to process data on users' achievements, physical activities, calories burned and use the data in the design of improved products for athletes. Nike's gamified sport offers the user a wide range of data on achievements and enables better lifestyle. To join NikePlus requires an e-mail, password, first and last name, date of birth and country. The NikePlus device has an inbuilt social feature with the aid of an application which helps to increase awareness and demand for the product. Users can challenge their friends which motivates to use the app on a regular basis and increases the level of user engagement.

1.6. Motivating elements

A definition of motivation by (Ryan & Deci, 2000) is “to be moved by something” and “therefore to better understand the relationships between specific mechanics and the effects they induce” (Hammedi et al., 2017). It is important to differentiate two major dimensions in user-created value: “the orientation of the value – intrinsic and extrinsic and the nature of the value - active and reactive” Robson et al. (2014). Whereas extrinsic value is consequential of outcomes generated through the experience, that is, motivation in anticipation for its expected result. The intrinsic value on the flip side, refers to user’ appreciation of the experience for its own sake, apart from any other signs that may result (e.g. playing for the sake of fun). The reactive value obtained from the user’s passive response to a consumption object such as technology. Active value, on the other hand, is derived from the active participation of the user in the production of the experience (Hammedi et al., 2017; (Bittner & Schipper, 2014) (Hammedi, Leclerq, C.R., & Riel, 2017).

“Gamification” hence, does operates through a mutual value process between users and designers. Indeed, designers introduce gamification mechanics in the service they provide to enable users to create their own experience (Jaakkola et al., 2015). The mechanics are determined and controlled by the designer, but the resulting gamification dynamics and emotions are difficult to predict. Thus, “the key issue designers face is to develop mechanics that generate the intended experience” (Robson et al., 2014; Robson et al., 2015). In establishing the motivation for a user’ decision-making process, it is essential also to consider what practical gamification designs used and the steps a user go through in arriving at their decision (Bittner & Schipper, 2014). In effect, gamification will be most successful considering their intrinsic drive most importantly before the extrinsic value

According to the Self-Determination Theory (SDT) by Ryan & Deci, (2000), providing choices implies that the situation is flexible and free from external pressure to influencing customer behaviour. “SDT is an empirically derived theory of human motivation and personality in a social context that differentiates motivation regarding being autonomous and controlled”. SDT offers a framework for explicating the level to which action is self-determined supporting the orientation of value: intrinsic and extrinsic motivations (Deci & Ryan, 2000). Humans have an innate tendency

to engage in exciting and playful activities, regardless of the obtainable rewards. A self-gratifying activity that gets people happy and, makes them get actively involved. These activities include educational, sports, socialising, etc.

Ryan and Deci in their analysis of SDT studies have identified several important social psychological (or contextual) factors that could affect one's need for intrinsic motivation. Namely, competence, autonomy, and relatedness. When these needs are met, self-motivation increases, and when not reached, motivation diminishes. “Competence means that humans need to have a feeling of mastery about a situation or content, where the mastery through clear and visual goals.” (Kartevoll, Wang, & Alsos, 2017) Autonomy: choices, requirements, deadlines, freedom and rewards (e.g., Deci 1971; d Ryan 1999; Ross 1975; Ryan and Deci 2000a), directing one’s actions. Relatedness refers to the feeling of relating to others in different forms, for example via family or friends (Kartevoll et al., 2017)

“It is said that if reward or other external events such as, threat of punishment (Deci and Cascio, 1972), positive feedback (Deci, 1971), competition (Deci & Betley et al., 1981), or choice (Zuckerman et al., 1978), was expected to thwart these basic needs. It was predicted to prompt an external locus of causality and undermine intrinsic motivation; but if the event were expected to support these basic needs, it was predicted to prompt an internal perceived locus of causality and enhance intrinsic motivation”.

The theoretical background, laid the foundation for the next sections, understanding the nitty-gritty behind what drives user engagement is a crucial determinant in designing a useful product to capture user desires via games and sparking much need motivation that increases participation. It is also interesting to understand game elements that satisfy intrinsic and extrinsic motivation as well as user behaviour in an online platform. With literature background on theoretical studies to back up this research, the author proceeds with presenting research methodology. As interactive Web has evolved in the last decade, it is imperative to answer research questions based on the conceptual theories and to present empirical findings relating back to it.

2. RESEARCH METHODOLOGY

The part to discussed in this chapter is the research methodology parameters. It starts by introducing the choice of research methodology: qualitative and quantitative methods, research design, sample procedure & description, followed by data collection & analysis with respective instruments and parameters of measurements.

2.1. Research design

Study 1 is a qualitative study conducted using "netnography" In answering the research questions, Bartl & Stockinger, (2014) "from a theoretical point of view, Netnography is regarded as one of the most important research tools. It enables researchers to access the community members' knowledge online which in turn assist to provide in-depth insights into the users. (Kozinets, 2002) The man behind Netnography has coined this term to provide a rich insight into consumers' interaction online". The objective in Netnogrphy is "to provide knowledge of the phenomenon under study". The author observed communication and engagement with online gamified platforms; social networks and forums, identifying the type of game elements applicable. Starting with the research objectives the benefits and motivation of the use of gamification in social interaction. Six platforms were observed, and data were recorded manually and coded by hand using coloured pen to highlight observations based on research questions.

Study 2 - In the quantitative method, Creswell & Creswell (2017), involves the collection of primary data via survey questionnaire, sent via Facebook and LinkedIn messenger individually to a network of young adults who could relate adequately based on the popularity of NikePlus. Data were collected using google forms. The method serves the purpose of "expanding" knowledge as a subset of study 1. Questions to find out what motivates and help user engage on this platform where asked. This method was required to further gain detailed knowledge on the evolving gamification of online platforms. Respondent was screened based on their understanding of the platform under review. Additional data collect includes age, gender and country of residence was

to be provided at will. A total of a hundred and four (n=104) respondents participated. Eighty-two (n=82) respondents proceeded to the second part based on their knowledge of the platform studied.

2.2. Data collection

Study 1 - Haven identified six platforms based on social interaction, motivation and user engagement to be studied, the author begins collection of data on the identified platform using netnograghy. There are two principal elements of this data collection. 1) the data the researcher directly copied from the communications of the members of the online community 2) the data the researcher directly inscribed regarding their observations of the web-based interactions and meaning (Kozinets, 2002), as related to the area of focus of this study. "Netnographers record their observations which is a time-tested and recommend method in netnography" (Kozinets, 2010, p. 3). The author spent the time to match research questions to Web-based platforms using search Google search engine. Before initiating data collection, the author familiarised self with the characteristics of the Web-based platforms (see Fig. 2.).

Figure 2. Gamification platform to be analysed
Source: Compile by the author, and downloaded from www.wordclouds.com

Study 2 - Regarding the quantitative method, data collection and focus based on popularity, survey question was designed and sent via private messages to network of young adults who have used NikePlus application via Facebook and LinkedIn. This study further tends to explore user engagement and motivation on NikePlus platform by measuring usability, design, mechanics and dynamics. The nature of the questions includes four closed-ended, with list of "checkbox" options to choose from and an additional option to get respondents "own" description. Statements with response measured with level of agreement by a 5-point Likert scale from "Strongly agree" to Strongly disagree". The questions assessed user engagement, motivation, expression, control, functionality, features, value derived (intrinsic and extrinsic)

2.3. Sample procedure

Study 1 - Sample procedure was carried out by adopting the "Netnographic" approach. The author suggests that netnography is a suitable method of identifying game elements in online gamification platforms. Netnographic approach Kozinets, (2002, p. 62) "a new qualitative research methodology that adapts ethnographic research techniques to study cultures and communities that are evolving through computer-mediated communication". Such as observation to study user engagement about achieving human desires which motivates users to take specific actions, noting the tools user respond to the most. According to Kozinets (2002, p. 63), there are five structurally different techniques of conducting netnographic sampling. (1) "Bulletin boards: such as news group, use-groups, or usenet groups often organised around a products, services, or lifestyle which are signification to marketing research". (2) "Independent web pages/Webrings: composed of thematically linked World Wide Web pages. Web pages provide online community resources for consumer-to-consumer exchanges". (3) "List: which are e-mail mailing lists unified by common theme e.g. educational services, hobbies, diet, music, etc". (4) "Multi-user dungeon and chat rooms: considered less market-oriented in their focus, containing information that is fantasy oriented, social, sexual, and rational. General search engine provides good directories for these communities". (5) "Social media platforms: Unprecedented communication, social media analytics demand to gain access to data and facilitates useful insights for organisations in

developing loyalty programs, real-time engagement, customer service and advocacy". Google analytics a resourceful media that provide data to netnographers to draw actionable insight for user and consumer base.

Study 2 – This procedure allows the author to gain a broader perspective to motivation and user engagement NikePlus as a subset from the qualitative method. Questions were categories into addressing identifying design elements, game mechanics, game dynamics, benefits of participation, motivational values. General questions were also asked with least age of respondent limited to 18 years old. Age was grouped for 18-25 years, 26-34 years, 35-44 years and 45-54 years. Responses were automatically collected via google forms and downloaded to an excel spreadsheet for author's analysis

2.4. Data analysis

Study 1 - In analysing the data collected, Kozinets (2010), follows the discussion of data collection with an explanation of netnographic data analysis and interpretation. "Analysis and interpretation involve classification, coding analysis and contextualisation of communicative acts". Kozinets' (2010) presented the following principles of analysing qualitative data as coding, noting, abstracting, comparing, checking, refinement, generalising and theorising. Practically, content analysis of users by conventional categorisation (Hsieh & Shannon, 2005), based on the theoretical background is also used to analyse observations. Kozinets (2002), also presents aspects of the data to consider during data analysis and describes elements of data analysis procedure. Furthermore, He offers helpful suggestions related to data analysis, such as focusing not on the objective meaning of the text, but on the meaning of the text for the users in the scenario under study.

Study 2 – Quantitative analysis translates into numerical values and mathematical expression of data. Responses from participants in the survey were captured direct automatic entry that includes age, gender and knowledge of the platform. Descriptive data analysis (Rowley, 2014) of data from google forms, downloaded to Excel spreadsheet and excel were used to present findings in the form of charts. Data analysis are an essential tool to "enable for data to be presented, discover and

quantify relations". Themes such as user engagement, motivation, motivational values, game mechanics and game dynamics were used to make a comparison with the qualitative method.

3. RESULTS AND DISCUSSION

Chapter three which is the empirical part will present results, discussion, comparison with previous studies, conclusion, proposals and recommendations. The platforms observed are representative of learning, and social interaction which is research focuses on how gamification increases user engagement in these web-based platforms. Kozinets (2010), also demonstrated how to construct and focus research questions appropriate for netnogragphy and offers guidelines for writing broad research questions to guide qualitative inquires (p. 81).

3.1. Study 1 - Netnography

Facebook, with many websites linked to social media sites like Facebook, the author went further to observe gamification elements on TTU Sports page. Interestingly, for every attendance, attendees get a badge attached to the session attended. The author observed that most web-pages linked to Facebook use gamification elements badges, progress bar and personalisation to increase user engagement. Facebook also use point element in the “like”, “views”, “share” and “comment” section of each post. In general, Facebook itself incorporates little gamification elements with notable ones as gameroom games: candy crush sage, farm hero saga, pet rescue sage and diamond dash. Others include quiz questions for data update on the user, a number of likes is classified as points.

LinkedIn plan for premium “job seeker” comes with a badge that could be displayed on the user’s status. Unfortunately, other premium subscriptions do not come with such gamified feature. In general, LinkedIn features main gamification elements which include badges, progress bar and trophies. The progress bar is used to encourage user input more data which is collected and used to suggest new connections and career opportunities. There is a progress bar that shows the profile strength in term of completeness. This feature encourages users to add as more information as required to have an “all-star” for a complete profile.

Gamification elements in Yahoo Answers are:

I. Leaderboard; ranking on Yahoo Answer is listed on the leaderboard by overall and weekly leaders based on the highest number of points and level earned. (Fig. 3) show an example of the first five highest ranking users.

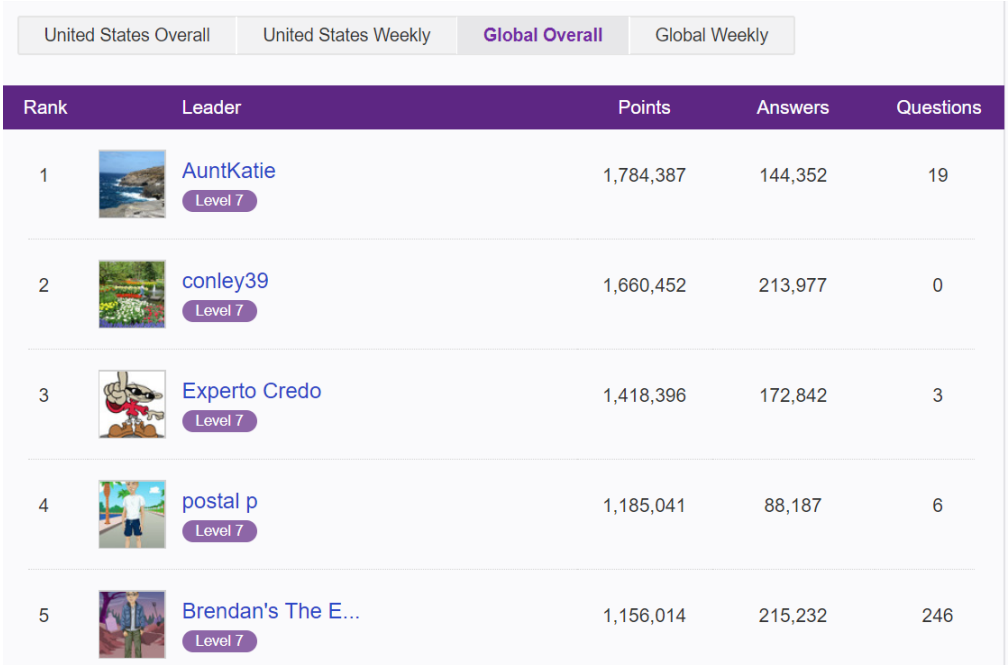

Figure 3. Yahoo Answers leaderboards
Source: (Yahoo!, 2018)

II. Points: User begins with free 100 points. (Fig. 4.) Below, summarises the points values for different actions. The points system had no real-world value and used to encourage users to answer questions and limit spam questions. It also serves as an identifier for active users.

Action	Points
Begin participating on Yahoo Answers	One Time: 100
Ask a question	-5
Choose a best answer for your question	3
Answer a question	2
Self-deleting an answer	-2
Log in to Yahoo Answers	Once daily: 1
Have your answer selected as the best answer	10
Receive a "thumbs-up" rating on a best answer that you wrote (up to 50 thumbs-up are counted)	1 per "thumbs-up"
Receive a violation	-10

Figure 4. Yahoo Answers points systems
Source: (Yahoo!, 2018)

III. Levels: this is another to keep track of how active users have been. The more points user earns, the higher the level. Higher level allows the user to rate, ask and answer more frequently. Fig. 5. below show how levels are gained.

Level	Points	Questions	Answers	Follows
7	25000+	20	160	100
6	10000-24999	20	160	100
5	5000-9999	20	160	100
4	2500-4999	20	160	100
3	1000-2499	15	120	100
2	250-999	10	80	100
1	1-249	5	20	100

Figure 5. Yahoo Answers levels
Source: (Yahoo!, 2018)

Vocabulary has elements of gamification are incorporated to perfect use to words and discover new vocabularies. Competing with millions of people across the world on this platform comes with fun and achieving an upward move on the leaderboard. Gamification elements on Vocabulary are points, levels, achievements, badges and leaderboard. Twenty various levels are starting as a "Novice" and climbing up the level to the highest obtainable level of "Word Czar". On the users' "My Progress" there is an icon representing user's level displayed and can be viewed by friends. 100 points are earned for every correct answer. For every milestone points achieved, a badge is awarded a "Mastery of the alphabetic word". (Table 4., See Appendix 4) Shows list of user engaging tools to motivate them to participate actively. On the user's "My account" page, there is a list of activities which includes: Assignments, My Progress, My Trouble Words, My Achievements, My List. Others are "Find a list to learn…", Create a New List…", "Words I'm learning", "Words I've Mastered". Game dynamics such as reward, status and achievement, and above listed game mechanics serves as an active user engaging factor. As much intrinsic motivation obtained for personal and social competitiveness, while extrinsically, performing users have top spots on the leaderboard as well as obtaining grades for assignments domiciled on the platform.

Kahoot has a maximum point obtainable for each question is 1000 points answered with 0.5 seconds, the fastest response gets the highest score, and it decreases as the time counts down in 60 seconds. However, the minimum point for each correct answer is 500 points. After each question, the level of each player is shown on individual screens while the first five students will have their names displayed on the big scoreboard screen in the class as the game progresses. Kahoot was found to be intrinsically motivating owing to the level of user engagement, enjoyability, learning outcome and building interest, and extrinsically motivating due to its competitiveness, focus, attentiveness to details during class discussion in preparation for the activity. Kahoot can also be played individually if students so wish for personal study.

In general, gamification features on NikePlus application includes points, levels, leaderboard, community notification, trophies, badges, progress bar and reward. Points are used to measure activities on an individual basis. Points used in evaluating set goals and comparing results with other users. The farther a runner moves, the more points users get, and the community allowed to

view positions on the leaderboard. NikePlus also rewards users in the form of trophies for each milestone level achieved. The progress bar is a gamified element that encourages users on an hourly time lap in the "Win the hour" feature of the activity. It serves as a physical motivation booster. The community notification is a feature applicable to "group" activities. Friends and users can create a community to receive encouragements making the activity intensely competitive. Also, users get to share their achievements with other friends on social media where non-participant get inspired to join in. Nike gives open-access to gathered data from runners because Nike understood the intrinsic and extrinsic motivation of users. Given the fun in gamification and considering the data it generates, engaging users in NikePlus platform help runners and athletes interact with each other, share data and learn from the community.

3.2. Study 2 - Survey

Furthermore, responses received from survey method showed some respondents (n=104). Male = 67% and female made up 33% of the total respondent. In addition to the general question, respondents were asked about their age and were distributed in no particular order to four groups. It includes 18-25 year which made up (50 %) of the total respondents, 26-34 years – (34%), 35-44 years – (11%) and 45-54 years – (5%). Chart representation of these data is presented in (Fig. 6).

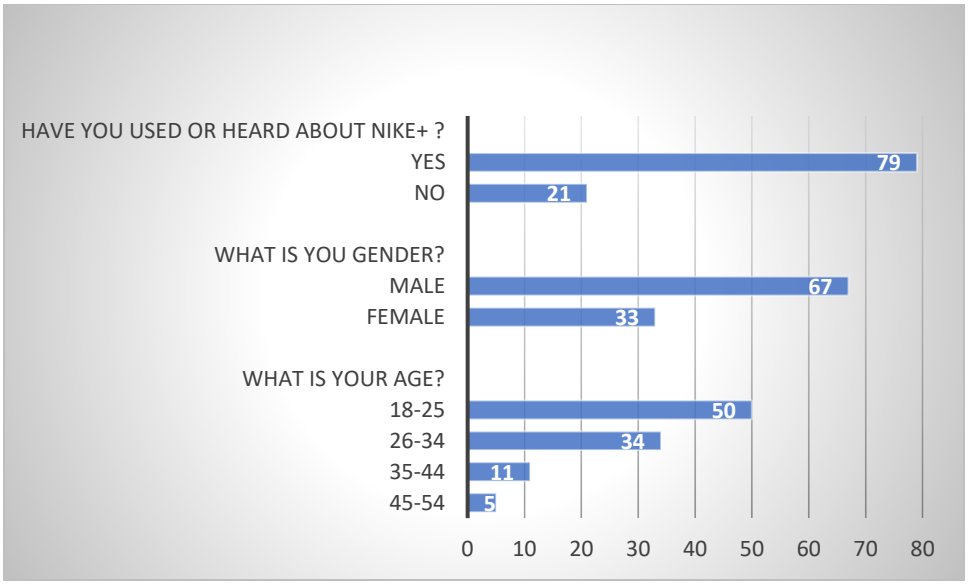

Figure 6. The outlook of respondents to survey questionnaire
Source: Results from data analysis on NikePlus as prepared by the author

Of this number n=82 (79% of n=104) indicated “Yes” to have used NikePlus. 28% and 51% of respondents “strongly agreed” and “agreed” respectively that NikePlus is “fun” to use. 27% and 59% of respondents “strongly agreed” and “agreed” respectively that NikePlus is engaging during active use.

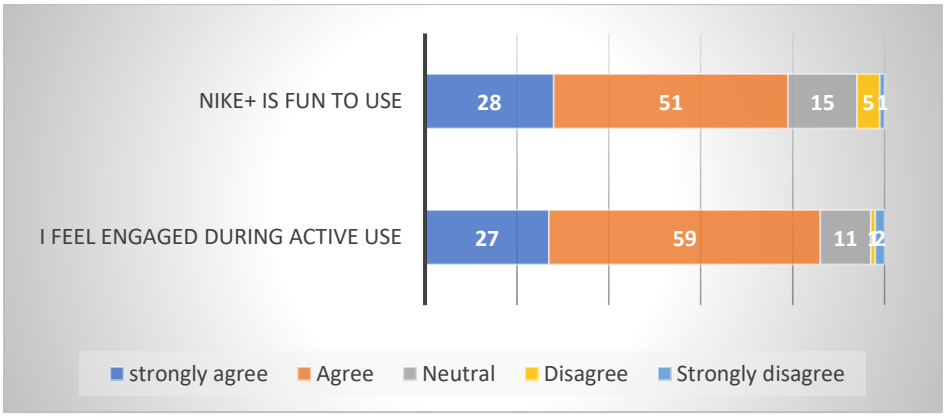

Figure 7. Fun and user engagement in NikePlus
Source: Results from data analysis on NikePlus as prepared by the author

When asked “what motivates to play on the NikePlus application?”, 52% indicated “self-motivation”, 40% indicated “social interaction”, 37% indicated for keeping records of activities, 31% signified the product or service as a motivation, 11% to “compete with others”.

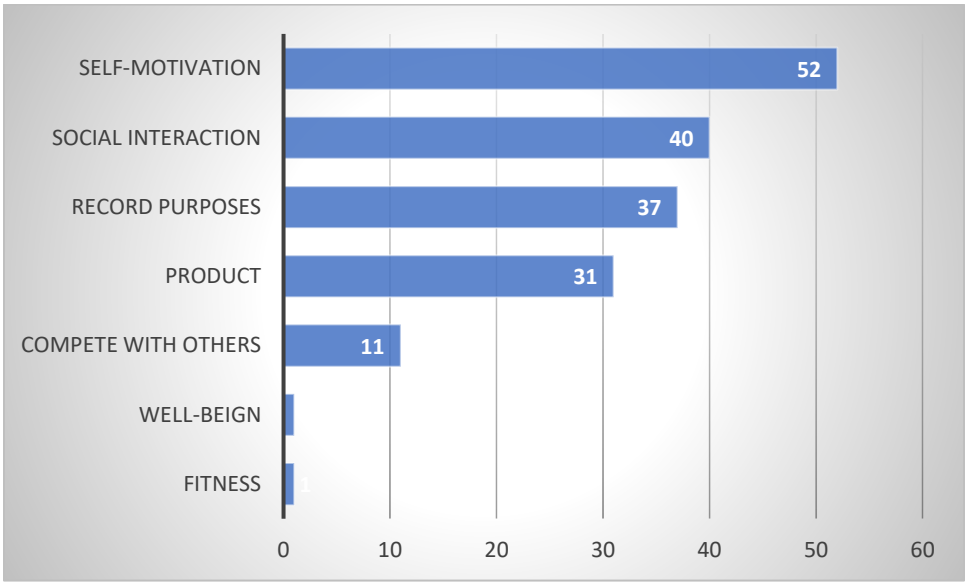

Figure 8. Motivation to play on NikePlus
Source: Results from data analysis on NikePlus as prepared by the author

The author sort to know what game mechanics were of high influence on active participation. Resultantly, as observed from on platform in the netnography approach, “points” got the highest percentage of 54%. “levels” at 48%, “challenges” at 46%, “gifts” at 12%, leaderboards ranking at 10%, virtual goods at 7%.

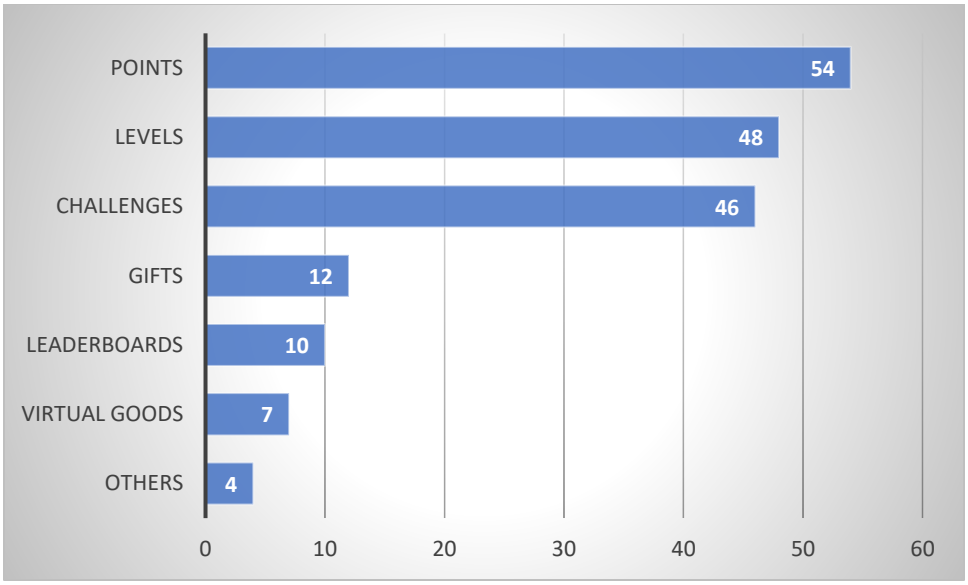

Figure 9. Gamification mechanics on NikePlus
Source: Results from data analysis on NikePlus as prepared by the author

Similarly, the question asked about what game dynamics encourages participants', 52% indicated "rewards", "achievements" came closely at 49% followed by "status" at 38%, "self-expression" at 28%, "gifts and completion" at 13% and 12% respectively.

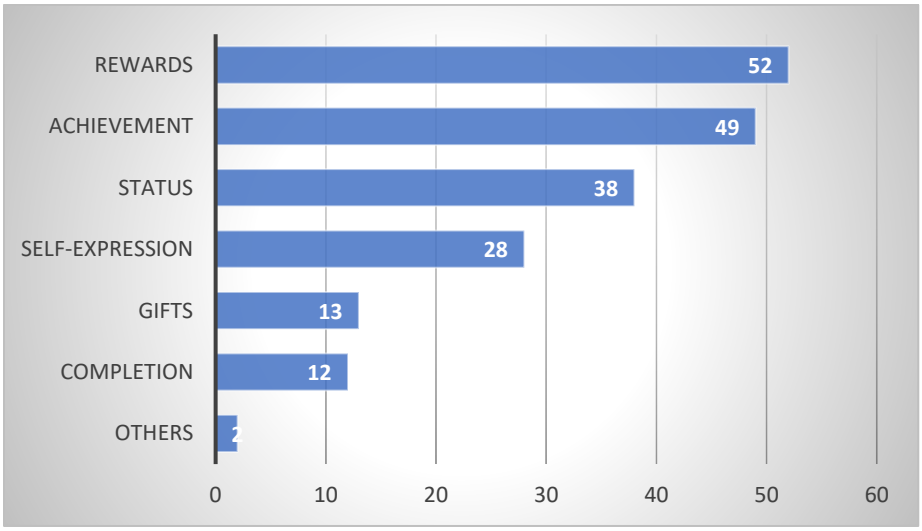

Figure 10. Gamification dynamics on NikePlus
Source: Results from a survey on NikePlus author's analysis

Also, the motivational value of importance to respondents is “intrinsic value” at 78% over “extrinsic” value at 56% for the combination of both. 52% of respondents said intrinsic motivational value serves as a sole benefit, while 18% solely choose extrinsic motivational value as the benefit derived on the NikePlus platform.

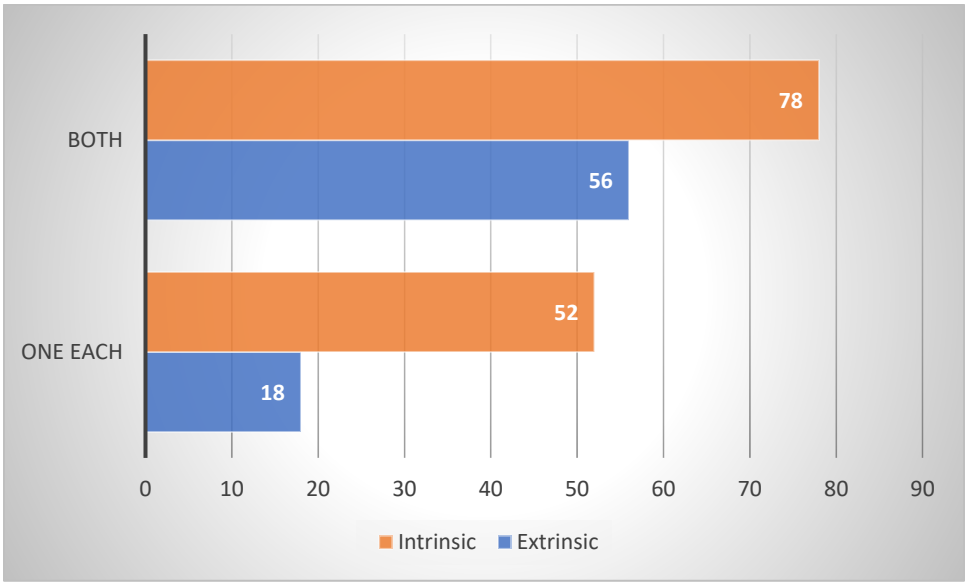

Figure 11. Intrinsic and Extrinsic motivational benefits on NikePlus
Source: Results from data analysis on NikePlus as prepared by the author

The chart above shows more people derived both intrinsic and extrinsic benefits compare respondents who were pleased with one motivational interest from the NikePlus platform.

In discussing the purpose of this research as establishing knowledge on the influence of the use of gamification online. The study was conducted using nethnography and survey on six online platforms and NikePlus respectively which represent “learning and social interaction” observing gamification elements as defined by (Crawford, 2003), reflecting specifically “interactivity and competitiveness” in the form of motivation and user engagement. As presented in the first section of chapter three, all platform understudied incorporated gamification elements into their services which have been beneficial for user participation. Comparing gamification is seen as playing an essential role in igniting specific actions. It was observed especially on Facebook and LinkedIn

where data on users is gathered with the use of gamification in return for reward and status. While Bittner & Schipper (2014) and Pellikka (2014) did an extensive study on motivation effects and gamification in social media respectively. Bittner and Schipper established that users "with prior gaming experience had higher purchase intentions for gamified products", and Pellikka established that "use of game elements in social media brings about sustainability of user base".

Also, this research did also established the use of gamification as a mechanism for user engagement and sustaining participation by way of challenge, competition and rewards. Also in agreement with Bista et al., (2012), all platforms in the scenario of the study had game elements such as badges and tasks for the place of reward, status, and achievement. Badges and points are most peculiar elements in online platforms which serve the purpose to motivative and engage users as also corroborated by (Antin & Churchill, 2011). Visible to note is in the case of Vocabulary, Yahoo answers, Kahoot and LinkedIn, where badges are used to as an identity of mastery and engaging towards premium membership subscription respectively. Gamification also increases perceived benefits as argues by Hamari & Koivisto (2013) on web-based platforms. NikePlus is a typical example of this benefits. The use of gamification compels users to log their running and workout activities. It serves a reminder, motivator when losing momentum, hourly countdown, community activity with friends and keeping up with data on calories burned. In their study, Bista et al., (2012) submitted those game elements can be connected to each other citing in badges are been linked to points in their work. For this study as well, online platforms were observed to use the similar connection. For example, Vocabulary, Yahoo answers and Kahoot used the combination of points and levels to advance on the leaderboard. NikePlus also used a combination of the progress bar and badges for every goal achieved.

Recommendations for this thesis are about the analysis of game elements in online gamified platforms and translation of game elements to user engagement; there arise future questions. The results indicate a pattern in the use of same set game elements for a targeted user group, therefore, for future studies, questions about why some category of gamified platform uses almost the same set of elements should be studied. There is also need for a reasonable time to devote to research across different time zones, seasons and time of the day. Furthermore, in the light of recent data concerns, data safety of users of gamified platforms should also be investigated.

CONCLUSION

This thesis studied six platforms: Facebook, LinkedIn, NikePlus, Kahoot, Vocabulary and Yahoo Answers as case study to establish knowledge of the influence of the use of gamification online. By netnography and survey methods, this research explored motivation, benefits and value derived from the use of these gamification platforms. It reveals that game mechanics such as points, levels, challenges, virtual goods, leaderboards and competitions are drivers of intrinsic motivation and hence increase participation and user engagement. In line with series of studies done about gamification, conceptualised basis for user engagement as mentioned in the related literature further solidifies Patterson et al., (2006) the user's physical, cognitive and emotional presence on gamified platforms.

The main take away from this research dwells mainly on the fact that there are preferred elements depending on users with intent to engage. For instance, social interaction platforms such as Facebook and LinkedIn mostly incorporate data gathering elements like a progress bar to motivate the user to add more information about themselves. Content web-pages such as Kahoot, Vocabulary, Yahoo answers and NikePlus mostly incorporates badges and competition to motivate participation for the user community. All platforms understudies seem to employ a variety of game mechanic and dynamics. It is also fascinating considering how aggressive game design is evolving and signs are indicating higher trends in the nearest future. Gamification is element increasingly gaining grounds in online platforms, notably in content sharing platforms to ensure motivation, quality and ease of access to progress data, and user-generated statistics.

Irrespective of the tremendous gains achieved via gamification, this research was limited regarding access to premium features. Findings signify involvement of corporate entities as significant subscribers to such service, for example, Kahoot for businesses and vocabulary for educators. Another limitation is a time constraint for observing the platforms as clearly revealed in the trend in gamification via google trends; it went from a high of 100 points in the second week of April 2018 to a low of 80 points for the week ending 28/04/2018. Therefore, tracking timed gamification (badges and levels are given at off-peak periods of the day) proves unrealistic. There exists addition

benefit (discount package) based on geographical location to some set of users of some platform for instance NikePlus.

In this paper, the author researched with the purpose to study and establish knowledge on the influence of the use of gamification in online platforms. The author chooses the topic to gain insight into the benefit of the use of gamification in learning and social interaction by acquiring knowledge on engagement via an online platform. The research which led to the following questions asked in this study are:

RQ1: What are the types of game element used in online gamified platforms?

Typical to all observed and analysed platforms is the “points” system, often linked to other elements that drive increased participation.

RQ2: How game dynamics and design mechanics translate to active user engagement?

It drives intrinsic and extrinsic motivation for learning, social interaction, loyalty and show-off of achievement that convert potential users. It is also a strategic component to be considered for game designers

The results indicate substantial willingness for user engagement in gamified learning platforms. Social interaction platforms themselves have few game elements; however because they easily incorporate other web-pages and group activities, it makes the overall experience engaging. Social network (Facebook and LinkedIn) platforms gamify to encourage users to provide additional data through their profile with game elements. Facebook has game elements such as points, score and quiz. LinkedIn has elements such as badges, progress bar and quiz. For Yahoo answers, it includes leaderboard, badges, levels, points and quiz. Vocabulary has game elements such as levels, points, badges, leaderboard, achievements and reward. Kahoot offers game elements such as points, levels, badges, trophies, leaderboard and achievement. NikePlus has gamification element that contains points, levels, rewards, competition, challenge, progress bar, community notification and trophies.

- *Some platforms in the same category make use the same set of elements.*
- *All platforms understudied seem to employ a variety of game mechanic and dynamics*
- *Gamification is increasingly gaining grounds in online platforms, notably in content sharing platforms to ensure motivation, quality and ease of access to progress data, and user-generated statistics.*
- *Value (intrinsic or extrinsic) are derived motivation via gamification.*
- *Content community seldom is driven by extrinsic motivation, e.g. LinkedIn, NikePlus and Kahoot*
- *In comparison with previous research, this study buttress gamification pivotal role in active user engagement.*
- *In the design process, user-end must be prioritised to eliminate ambiguous interface.*

Further research should involve query on why some category of gamified platform use almost the same set of elements should be studied. There is also need for a reasonable amount of time to consider different time zones, seasons, and accessibility to essential tools (internet, computers, smartphones, etc.) can deprive users of third world countries from catching up with technological advancement. Furthermore, in the light of recent data concerns, data safety of users of gamified platforms should also be investigated.

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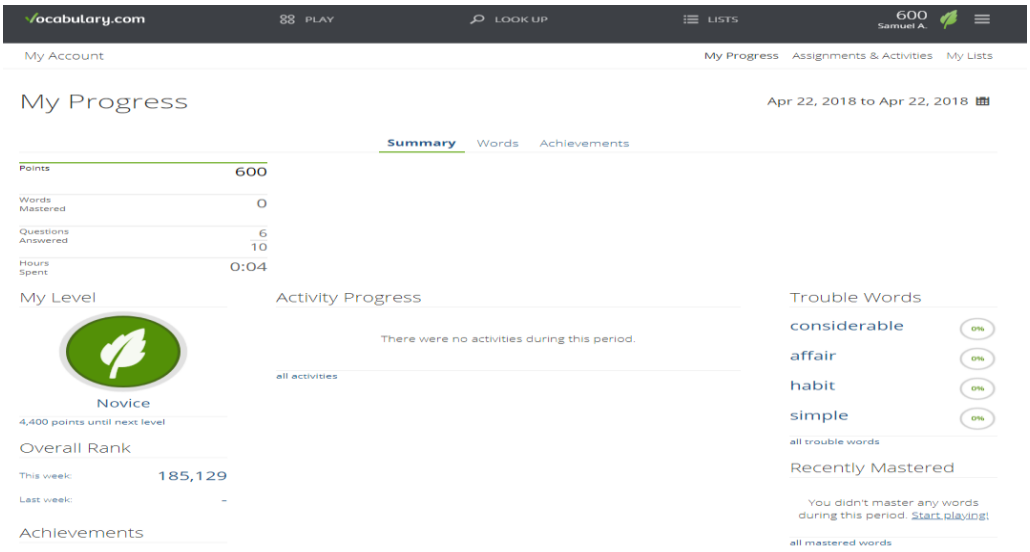
APPENDICES

Appendix 1. Badges for fitness sessions attended

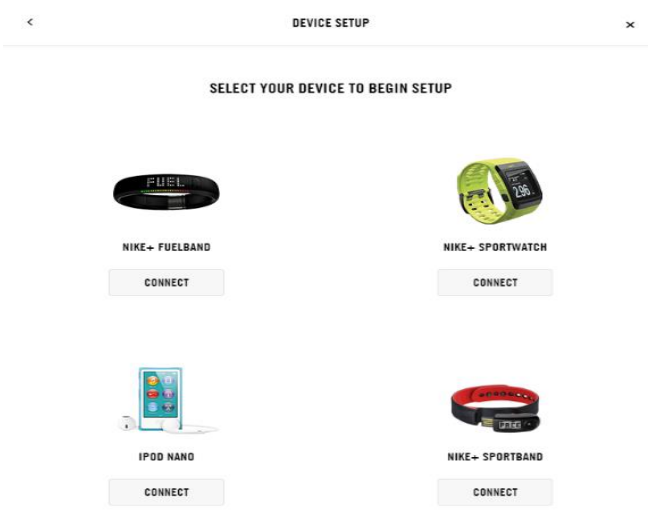
Source: TTU sport Facebook page.

Appendix 2. Gamification outlook on Vocabulary



Source: (Vocabulary, 2018)

Appendix 3. Tools for gamification on NikePlus



Source: (Nike, 2018)

Appendix 4. Gamification elements in Vocabulary.com

Table 4.

Levels	Points	Badges	Achievements
Novice	0	Mastered an 'A' Word	Perfect Round!
Hotshot	>5000	Mastered a 'B' Word	Streak - 5 in a Row
Phenom	>25000	Mastered a 'C' Word	Streak - 10 in a Row
Prodigy	>50000	Mastered a 'D' Word	Streak - 15 in a Row
Brainiac	>100000	Mastered an 'E' Word	Streak - 20 in a Row
Savant	>200000	Mastered an 'F' Word	Streak - 25 in a Row
Maven	>300000	Mastered a 'G' Word	Streak - 50 in a Row
Verbivore	>400000	Mastered an 'H' Word	5 Words Mastered
Logophile	>500000	Mastered an 'I' Word	10 Words Mastered
Sage	>600000	Mastered a 'J' Word	50 Words Mastered
Maestro	>700000	Mastered a 'K' Word	100 Words Mastered
Guru	>800000	Mastered an 'L' Word	150 Words Mastered
Polymath	>900000	Mastered an 'M' Word	200 Words Mastered
Sesquipedalianist	>1000000	Mastered an 'N' Word	250 Words Mastered
Lexicomaniac	>2000000	Mastered an 'O' Word	300 words Mastered
Vocabularian	>5000000	Mastered a 'P' Word	400 Words Mastered
Walking Dictionary	>10000000	Mastered a 'Q' Word	500 Words Mastered
Running Dictionary	>25000000	Mastered an 'R' Word	
Mastermind	>50000000	Mastered an 'S' Word	
Word Czar	>100000000	Mastered a 'T' Word	
		Mastered a 'U' Word	
		Mastered a 'V' Word	
		Mastered a 'W' Word	
		Mastered an 'X' Word	
		Mastered a 'Y' Word	
		Mastered a 'Z' Word	

Source: (Vocabulary, 2018)