

## **Gamification Rewards in Motivating Tertiary Students during a Pandemic**

**Jacqueline Thomas Pereira<sup>1,2</sup>**  
**Goh Hock Seng<sup>1</sup>(Corresponding author)**  
**Raja Nor Safinas Raja Harun<sup>1</sup>**

Faculty of Languages and Communication  
Universiti Pendidikan Sultan Idris (UPSI), Malaysia<sup>1</sup>

Faculty of Social Sciences and Liberal Arts  
Taylor's University, Malaysia<sup>2</sup>

email: \*[P20162001883@siswa.upsi.edu.my](mailto:P20162001883@siswa.upsi.edu.my); [pereira.j@taylor.edu.my](mailto:pereira.j@taylor.edu.my); [goh.hs@fbk.upsi.edu.my](mailto:goh.hs@fbk.upsi.edu.my);  
[nor.safinas@fbk.upsi.edu.my](mailto:nor.safinas@fbk.upsi.edu.my)

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**Abstract:** Gamification is being used in education to motivate students through various game elements, one of which is rewards. However, rewards should be relevant and suitable otherwise it will not have the desired effect. The aim of this study was to determine the types of redeemable rewards that students in an Institution of Higher Learning would like to obtain to motivate them to do well in their modules or programmes. A questionnaire, which included close and open ended questions, was distributed to students in a local private institution. 158 completed questionnaires were obtained from students who were in Foundation, Diploma, Bachelors and Masters degree programmes. The questionnaire included some suggestions of rewards and students were asked to rank them. They were also asked to suggest some rewards which they thought would motivate and engage them to attempt and complete work given in class or as homework. The results show that students would like to receive tangible as well as intangible rewards in return for points collected during the semester. Many preferred tangible rewards like additional marks which go to the end of the semester grade and monetary rewards. There were a few who wanted some personal feedback on assignments or homework given to them. The implication of the findings is: if instructors chose to reward students using gamification, they will be able to ensure that the right type rewards are used to increase students' motivation and engagement to do well in their modules.

**Keywords:** Gamification, rewards, motivation, institutions of higher learning, pandemic

## **INTRODUCTION**

The Covid-19 pandemic has created a lot of disruptions in most areas in most countries around the world. One of the areas badly hit is education, where schools (Bonal & González, 2020; Kuhfield et al. 2020) and institutions of higher learning (Marinoni, Van't Land & Jensen, 2020) have gone through various strategies to help students and teachers maintain teaching and learning at its optimum (Chang & Yano, 2020). There were months when students were allowed to go back to face-to-face classes depending on the levels of study (exam classes). Students in higher learning institutions who had to use the laboratories or studios and those who had kitchen classes were allowed to attend classes on campus and some institutions opted for 100% online classes (synchronous and asynchronous) or 50% online classes, where students had online lectures, but tutorials were face to face. The education world was struggling to make sure students were catered to and teaching and learning could take place as smoothly as possible given the circumstances (Eder, 2020). Many teachers were trying their level best to cope as this was an unprecedented situation, having to teach 100% online (Teng & Wu, 2021). Others were fortunate that their management had already put into place 30-50% blended learning of all modules due to SARS and the haze scare that hit South East Asian countries like Malaysia (Nurhanim, Lim & Filzah, 2018) where schools and institutions of higher learning had to be closed for a few days. However, that seems to be nothing, compared to what this pandemic has caused. Since the movement control order in Malaysia was enforced since March 18, 2020, schools and higher learning institution classes have been going on and offline. Majority of which has been online.

One of the issues that has been brought to light is the motivation level of the learners. There are studies that have shown that students' motivation had increased during online learning compared to traditional classes (Bernard, Borokhovski, Schmid, Tamim & Abrami, 2014; Lockman & Schirmer, 2020). On the other hand, studies have also shown the opposite (Baber, 2020; Zboun & Farrah, 2021). The challenges faced by students in online learning are fatigue, not challenging, not accustomed to online learning, demotivation, apart from others, which then leads to poor attendance and attrition (Adams, Randall, and Traustadóttir, 2015). So, it is important to find strategies to motivate the students to put in the extra effort.

It can be seen that some form of external motivation is required to stimulate student's intrinsic motivation. A factor that is important to consider when motivating people is the timing of the reward given (immediate versus delayed rewards (Woolley & Fishbach, 2018). Their study showed that immediate rewards increases intrinsic motivation. According to studies conducted by Kim and Frick (2011); Watted and Barak (2018); some other factors that positively influence motivation are general interest, personal growth, enrichment, age, the use of content in real life and competency in technology. Although according to Keller (1978), extrinsic motivation is detrimental to intrinsic motivation, most formal education is based on how well students do in assessments and what grades are obtained (as cited in Timmis & Cook, 2004). So as instructors, our main goal is to help students do well in their modules, which means motivating them to engage with all aspects of the module; online discussions, forums, group work, completing homework and assignments which ultimately ends with a final grade for the module.

## **BACKGROUND OF THE STUDY**

Motivating students is an issue that instructors must deal with in class as it has been stated that present day students are not motivated by traditional teaching (Simões, Redondo & Vilas, 2013). In face-to-face classes, teachers must be careful to ensure that students are motivated enough to attend classes and to do well in class and participate with other classmates (Aziz & Kazi, 2019). In a physical class, teachers can study students' facial expressions and body language to gauge if there are any issues related to disinterest or other problems. Unfortunately, this is not the case with online classes because students are not required to turn on their cameras (Castalli & Sarvary, 2021) and it has been worse with the current and various lockdowns due to the pandemic. Instructors have to deal with learners who may be having various problems related to being forced to stay at home for an extended period of time.

The unavailability of classmates and teachers on hand to answer questions when lessons are synchronous or asynchronous, can demotivate students (Powers, Brooks, Galazyn, & Donnelly, 2016). Although teachers are always checking for understanding through questions, most students do not turn on their cameras and do not answer unless they are called by their names. Another problem which has been a thorn in the side of instructors is the low rate of non graded assignment completion or homework especially among the current net generation (Junco & Cotton, 2012). Homework or non-graded assignments have been touted as beneficial to students as it helps with higher grades (Ehsan & Miles, 2020; Ramdass & Zimmerman, 2011). So, if homework has been proven to be beneficial, why do some students not do them? To answer this question, Planchard, Daniel, Maroo, Mishra & McLean (2015) conducted a study and they found that most students did not complete non graded homework for various reasons such as “too difficult” and “too long”. Their overall finding was that students were more likely to complete extra credit assignments than non-graded homework. There was no co-relation between what students reported and the homework completion rates. They go on to further recommend instructors to create assignments that factor towards final grades.

One of the ways to extrinsically motivate students is to gamify modules, lessons or activities. Gamification is the application of game-like features, as can be found in video games, in non-game situations (Deterding, Dixon, Khaled & Nacke, 2011). By using different game mechanics or elements in class, students can be motivated and engaged during lessons. The gamification features mentioned in Alsawaier, (2018) are; badges, points, leaderboards, rewards, challenges, levels, virtual goods, choice, quests, progress bars and status. Of these elements, redeemable rewards were found to be one of the highest rated elements (Chang & Wei, 2016; Kusuma, Wigati, Utomo & Suryapranata, 2018; Ortega-Arranz, Kalz & Martines-Monez, 2018). The present study is part of a larger project where comparisons were made between the usage of leaderboards and rewards to promote the completion of homework given in English language classes. Therefore, the specific aim of this study was to discover what kind of rewards students in institutions of higher learning would find meaningful and relevant to invest their time to work harder and complete non-graded homework which will help them to reinforce the course material and in turn help them to do well in the course.

The researchers are of the opinion that rewards should be relevant or meaningful to students otherwise they would not be bothered to work towards earning the points to exchange for the rewards. This opinion is in line with the opinion of Fefer, DeMagistris and Shuttleton (2016) that students' preferences should be assessed before implementation as it could lead to student success. Earning points alone is pointless as students tend to put in more effort if there are redeemable

rewards (Rezaei, Sonnabend & Westbrook, 2021). There is a dire lack of studies conducted to identify redeemable rewards that are relevant, meaningful and suitable for students in institutions of higher learning. Therefore, to address this gap in literature the research questions for this study were:

1. What kind of rewards do students find meaningful?
2. Does gender determine the type of rewards students find meaningful?

To answer these questions, a mixed method approach was used to collect the data. The study was of an exploratory design which utilised a questionnaire to collect data. Before the questionnaire was prepared, the researcher had interviewed 20 students randomly (Hurst & Bird, 2019) to find out what kind of rewards they would find meaningful to exchange for points in their courses or modules. These suggestions were used to prepare the questionnaire. The questionnaire which consisted of open and close ended questions were randomly distributed online to students from various programmes in a private Malaysian University. The open-ended questions included demographics of the respondents and a question asking them to list as many appealing and relevant rewards as they can which were not in the list of rewards given. The close ended questions required students to rank 11 rewards given. This was done using a 4-point Likert scale. The researcher was of the opinion that a 4-point Likert scale would ensure students make a decision (Croasmun & Ostrom) and it would avoid from students answering on the mid-point (Chyung, Roberts, Swanson, & Hankinson, 2017)

The eleven rewards which the respondents had to rank were:

1. Delay in submission of assignments
2. Extra time to complete work given in class
3. Extra time to complete take home tests or exams
4. Extra time to complete the final exam
5. Food (KFC, McDs, etc)
6. Small gifts which cost not more than RM50
7. Extra marks to be added to the final marks
8. Personal feedback on assignments completed
9. Extra consultations for graded assignments
10. Not required to attend a tutorial (attendance not counted)
11. Not required to complete a nongraded exercise

The questionnaire was pilot tested on 58 respondents. The reliability of the questionnaire was examined through the use of Cronbach's Alpha resulting in an obtained value of .710 which is considered acceptable (Taherdoost, 2016).

Construct, content and face validity were checked with the help of experts in questionnaire preparation. The pilot test respondents were asked for feedback and items which were ambiguous were corrected. 158 completed questionnaires out of a total of about 600 students were returned, although the students were reminded a few times over a period of three weeks.

The close-ended question was analysed quantitatively using descriptive statistics while the open-ended question in the questionnaire was analysed thematically using the six steps recommended by Braun and Clarke (2006). This was because although a majority of the

respondents had just listed their answers, there were a few who had written explanations and full sentences.

## FINDINGS

### Quantitative analysis

Out of the 158 respondents, 59.7% (95) were between the ages of 19 to 20 while the others fell in the age group of 16-18, 22-24 and 25 and above. 69.18% (110) were Malaysians and the next highest group was from China 13.9% (22) followed by respondents from Indonesia 5.7% (9). 62.3% of the respondents were females and 37.7% were males.

*Table 1: Meaningful rewards*

	very meaningful		meaningful		not meaningful		not meaningful at all	
	Count	Row Valid N	Count	Row Valid N	Count	Row Valid N	Count	Row Valid N
		%		%		%		%
1 Personal feedback on assignments completed	104	65.8%	42	26.6%	10	6.3%	2	1.3%
2. Extra marks to be added to final marks at the end of the semester	104	65.8%	33	20.9%	13	8.2%	8	5.1%
3. Extra consultation(s) for assignments	79	50.0%	55	34.8%	21	13.3%	3	1.9%
4. Extra time to complete work given in class	72	45.6%	57	36.1%	26	16.5%	3	1.9%
5. Extra time to complete the final exam	77	48.7%	51	32.3%	20	12.7%	10	6.3%
6. Extra time to complete take home tests or exams	82	51.9%	45	28.5%	23	14.6%	8	5.1%
7. Small gifts (which cost not more than RM50)	60	38.0%	57	36.1%	32	20.3%	9	5.7%
8. Food (KFC, McDonald's, etc)	58	36.7%	50	31.6%	39	24.7%	11	7.0%
9. Delay in submission of assignments	43	27.2%	53	33.5%	31	19.6%	31	19.6%
10. Do not have to complete a nongraded exercise	32	20.3%	49	31.0%	46	29.1%	31	19.6%
11. Not required to attend a tutorial (attendance will not be counted)	25	15.8%	42	26.6%	52	32.9%	39	24.7%

Table 1 shows the percentage of respondents according to their choice of very meaningful rewards (1) not meaningful at all (4), ordered as the reward found most meaningful to least. These results answer the first research question.

From table 1, it can be seen that personal feedback from lecturers on assignments that needed to be handed in was the reward that was found to be meaningful to 92% of the respondents which includes those who ranked it as 'very meaningful' and 'meaningful' in the questionnaire.

This finding is in line with other studies that show students think that feedback is crucial for them to improve on their work (Ellis & Loughland, 2017; Zhang & Zheng, 2018). Bader, Burner, Iversen and Varga (2019), found that students in their study appreciated critical feedback which were specific and guided them to improve.

This was followed by the reward which offered extra marks as the redeemable reward at the end of the semester, with a percentage of 86.7%. The reward rated as the third meaningful was extra consultation, which had 84.8% of the respondents.

Extra time to complete in class exercises, take home tests or exams and final exams were found to be meaningful by 80% of the respondents.

The rewards which were the least meaningful to the respondents were the rewards which allowed them to be absent from class and the one not required for them to complete non-graded exercises at 42.4 % and 51.3 % respectively.

The second research question is answered by the results seen in Table 2 which shows the breakdown of the number and percentage of respondents according to gender and the rewards they ranked from very meaningful (1) to not meaningful at all (4). The findings show that both the genders found 9 out of the 11 rewards meaningful: ranging from 59.8% to 94.9%. However, both genders found the reward which allowed them to miss tutorials to be not meaningful; male 44% and females 41.2%. In addition, less than half of the female respondents(49.4%) found the eleventh reward: completing non graded exercises not compulsory, to be not meaningful but more than half of the male respondents (54.1%) found it to be meaningful.

The reward with the biggest difference between both genders is the need for consultations with most females preferring consultation at 88.6 % compared to the males at 78.7%.

### **Qualitative Analysis**

The open-ended question was answered by only 82 respondents. A few respondents gave the answer that there was nothing else they found meaningful. The responses to the open-ended question shows that many of the listed rewards were similar to the ones in the close ended questions. There were basically 8 major themes that emerged from the analysis of the open-ended question.

In Table 3 the themes are presented together with supporting quotes of some respondents. The percentage shows the proportion of respondents who listed the reward.

The rewards listed were: gifts in the form of vouchers, food, stationery, books and money, the need for extra consultations to help with assignments and personal feedback from instructors, the need for recognition in the form of certificates, awards, praises, compliments and even displaying their achievements and works in public.

There were also requests for scholarships and discounts in fees, break time and a request for instructors to show concern to students by remembering names and being more approachable. Extra time was also seen to be a meaningful reward. This was in relation to completion of assignments and assessments.

A breakdown of the males and females who listed the rewards is shown in Table 4. Females were more responsive to this question, as of the 82 respondents, only 29 (35.36%) were males. Rewards mentioned here that were not mentioned in the close-ended question are scholarships, break time and show of concern by instructors at 31.03%, 24.13% and 17.24% respectively. The table shows that of the 8 rewards that were listed, a higher percentage of males found scholarships and extra time to be meaningful rewards than females. Both genders showed a similar percentage (males; 27.58% and females; 27.77%) for vouchers, gifts and money. The results also show that the percentage of males who found scholarships and discounts to be more meaningful were higher than females at 55.56% (males) and 44.44% (females). Whereas only females felt that they would prefer instructors to show some concern when dealing with them at 100%, more break time to spend with family and away from lessons were preferred by females (71.43%) than males (28.57%).

*Table 2: Percentage of respondents according to gender and rewards*

	Gender															
	Male								Female							
	very meaningful		meaningful		not meaningful		not meaningful at all		very meaningful		meaningful		not meaningful		not meaningful at all	
	Row Valid	Row Valid	Row Valid	Row Valid	Row Valid	Row Valid	Row Valid	Row Valid	Row Valid	Row Valid	Row Valid	Row Valid	Row Valid	Row Valid	Row Valid	Row Valid
	N	N %	N	N %	N	N %	N	N %	N	N %	N	N %	N	N %	N	N %
1. Delay in submission of assignments	16	26.2%	22	36.1%	17	27.9%	6	9.8%	27	27.8%	31	32.0%	14	14.4%	25	25.8%
2. Extra time to complete work given in class	25	41.0%	23	37.7%	11	18.0%	2	3.3%	47	48.5%	34	35.1%	15	15.5%	1	1.0%
3. Extra time to complete take home tests or exams	29	47.5%	20	32.8%	9	14.8%	3	4.9%	53	54.6%	25	25.8%	14	14.4%	5	5.2%
4. Extra time to complete the final exam	28	45.9%	19	31.1%	8	13.1%	6	9.8%	49	50.5%	32	33.0%	12	12.4%	4	4.1%
5. Food (KFC, McDonald's, etc)	24	39.3%	20	32.8%	13	21.3%	4	6.6%	34	35.1%	30	30.9%	26	26.8%	7	7.2%
6. Small gifts (which cost not more than RM50)	22	36.1%	23	37.7%	13	21.3%	3	4.9%	38	39.2%	34	35.1%	19	19.6%	6	6.2%
7. Extra marks to be added to final marks at the end of the semester	36	59.0%	14	23.0%	5	8.2%	6	9.8%	68	70.1%	19	19.6%	8	8.2%	2	2.1%
8. Personal feedback on assignments completed	34	55.7%	20	32.8%	6	9.8%	1	1.6%	70	72.2%	22	22.7%	4	4.1%	1	1.0%
9. Extra consultation(s) for assignments	27	44.3%	21	34.4%	11	18.0%	2	3.3%	52	53.6%	34	35.1%	10	10.3%	1	1.0%
10. Not required to attend a tutorial (attendance will not be counted)	6	9.8%	21	34.4%	19	31.1%	15	24.6%	19	19.6%	21	21.6%	33	34.0%	24	24.7%
11. Do not have to complete a nongraded exercise	11	18.0%	22	36.1%	16	26.2%	12	19.7%	21	21.6%	27	27.8%	30	30.9%	19	19.6%

*Table 3: Themes and supporting quotes*

Themes	Sub Themes	Supporting Quotes
Feedback & Consultation (17%)	<ul style="list-style-type: none"> <li>• Feedback</li> <li>• Advice</li> <li>• Suggestions</li> <li>• Consultation</li> </ul>	Extra guidance (S2F) Extra study help (S14B) Personal feedback on the student's progress between months(S15B)
Extra Marks (17%)	<ul style="list-style-type: none"> <li>• Extra marks</li> <li>• Credits</li> </ul>	Anything to increase the student's grade (S5F) Giving extra points for graded assignments (S6F) Extra points for assessment marks in total (S33F)
Break time (8.5%)	<ul style="list-style-type: none"> <li>• More time for fun</li> <li>• Less work</li> <li>• Less lectures</li> </ul>	Short fun activities, rest time, short breaks (S39F) Lesser time to attend lectures or reduce the hours needed to attend lectures (S63B) Spend time with family(S74D)
Extra time (7%)	<ul style="list-style-type: none"> <li>• More time for assignments</li> <li>• More time for exam</li> </ul>	Flexibility in submissions (S8M) Extra time to complete assignments (S56B) Giving more time for assignments (S9M)
Show Concern (6%)	<ul style="list-style-type: none"> <li>• Show concern</li> <li>• Understanding</li> <li>• Forgiving</li> </ul>	Show more concerns to students, like remind them the due date of assignments earlier (S27B) Lecturer remember all the students name(S28B) Be understanding when a student can't complete their assessment (S35F)
Gifts (28%)	<ul style="list-style-type: none"> <li>• Vouchers for food</li> <li>• Money</li> <li>• Gift cards</li> <li>• Books</li> <li>• Stationery</li> </ul>	Provide students with gifts such as grab vouchers or taking them out for a meal, or even stationery would be nice (S48F) Rewards such as vouchers or coupons (S26B) Healthy snack, on campus sporting event tickets, movie tickets, Netflix subscription (S16B)
Recognition (24%)	<ul style="list-style-type: none"> <li>• Certificates</li> <li>• Awards</li> <li>• Compliments</li> </ul>	Acknowledgement and constant encouragement ...that is what needed (S7M) I personally prefer compliments (S25B) Praising and congratulating students (S40F)
Scholarships (11%)	<ul style="list-style-type: none"> <li>• Discounts for fees</li> <li>• Bursary</li> <li>• Scholarship</li> </ul>	Discount for Masters/PhD (S59 B) Bursary and Scholarship (S66D) The tuition fees could be deducted a little bit according to the progress (S60D)

## Discussion

The following section will be a discussion on the findings in relation to the research questions:

1. What kind of rewards do students find meaningful?

The findings show that the result of the open- ended question supported the result of the close-ended questions in the category of feedback and consultation.

Students found feedback and consultations important for self-efficacy and doing well in the course. Two respondents commented:

*Feedback (What is good about my assignment and what needs to be improved so I know what to do next)(S63B)*

*Consultations (I think it's important for students like me to have lecturers who explain assignments in more details, instead of giving a little to none explanation at all. It is because I feel clueless and confused with the assignment sometimes when it is not well-explained). (S54B)*

This finding corroborates the findings of Lipnevich and Smith (2009) where they conclude that giving personalised feedback which allows students to improve on their work motivates them to improve further.

Another category which was found to be meaningful to respondents in both the questions is extra marks. As a respondent suggested extra assignments to get extra credits or marks to improve final grades.

*Extra assignments to obtain additional marks if the mark for the initial assignment is not satisfying enough (S87F)*

Although it has been reported that giving extra credits or marks can cause an inflation of grades (Knore, 1996) apart from concerns about fairness, student autonomy and responsibility, student abuse, grade inflation, and the lowering of educational standards (Norcross et al. 1989; Norcross et al., 1993; Corsun, 2000), a study conducted in Italy showed that giving extra credit pop quizzes actually did increase the proportion of students who managed to get a passing grade (Ennis, 2018). The inflation of grades was controlled by awarding a maximum of 1.5 points. Despite the limitations the author did see the potential of extra credits in language instruction. Interestingly in a replication of the study, Ennis (2020) supports his earlier study and claims that giving extra credits gives positive results. This researcher is of the opinion that if giving extra credits can bring about positive results without being detrimental then it should be at least tried out in classes.

The researchers found that although not many mentioned it, it is important to note that there were a few respondents who requested for more break time. This was surprising because this data collection was carried out during the 100% online learning mode during the pandemic. Could it be possible that students felt that they were being burdened by assignments just because they were thought to have the time to complete them since they were studying from home? In a study conducted by Oltean (2020), it was found that after a prolonged enforced online learning system due to the pandemic, students were exhausted due to attending classes and other issues related to online learning. Oliveira, Teixeira, Torres and Morais (2021) also found that there was an overload of work since classes were going on uninterruptedly, without breaks.

The next reward that was ranked quite highly (meaningful) was the need for extra time for assignments and for take home tests. Again, is this due to the amount of work given by instructors, thinking that students were at home anyway and they had nothing else to do? This supports the findings of Oliveira, Teixeira, Torres and Morais (2021), where a student interviewee claimed that although 90 minutes were given to complete the final exam and they were at home, there was not enough time for cheating to occur. Regarding time for assignments, the findings of this study are aligned with the findings of Raheim (2020). That researcher had found, through a triangulation of qualitative data collection that there were students who were exhausted because of the overload of assignments. However, other studies have shown that the problems only arose when completing

group projects and assignments (Adnan & Anwar, 2020) and that students actually feel that there was more flexibility in completing their assignments (Schaeffer et al, 2020). According to Schaeffer et.al, their respondents adjusted well because of time management where they scheduled time for school-work, play and family. This researcher is of the opinion that due to the suddenness of the conversion from traditional classes to online classes, some students have not had the time to adjust to the new norm.

Another reward suggested by a few respondents was that they would prefer if instructors showed more concern for their well-being like asking how they are, watching a movie with them and just spending time with them after classes. This could have been related to physical classes but can this be done during the current pandemic situation? In a study conducted by Hagenauer and Volet (2014), teacher-student relationship in higher education is important as it is crucial to successful study progress of students. However, in another study conducted by Niemi and Kousa (2020), some teachers interviewed stated that teacher-student interaction was not very positive as it was not easy for them to interact with students who did not respond in online classes. In this case, how are teachers to interact with students after class hours especially if teachers are also struggling to balance between work and play, and turning modules into online materials in such a short notice?

Gifts in the form of money, vouchers, food and stationery were some of the rewards found to be meaningful in both the rankings as well as listed by respondents. This researcher has grouped the various rewards under the category of money as it would incur costs to get the tangible rewards. This result corresponds with the findings of a study conducted by Bakar, ChePa, Hivadullah and Hussain (2018), which states money was the most preferred reward according to their respondents. This researcher assumes that many university students would prefer rewards as mentioned above in order to save their own money and it can reduce their financial burden as whatever little helps.

One of the rewards listed by many of the respondents comes under the theme of recognition. Respondents had listed that they would have found awards, certificates compliments and praises very meaningful to them. The researcher found this to be interesting as it suggests that even older students are not immune to being praised and having their efforts recognised as it was found to be acceptable by secondary school students (Fefer, DeMagistris & Shuttleton, 2016). In a study conducted on middle school students, it was found that praise for students' effort was preferred than praise for ability (Schneider, Hulac, Mickelson, & Phillips, 2021). Zhou, Chen, Fan and Ji (2019) concluded in their study on college students' perception of digital badges (which is a form of recognition), that participation became active because it was a representation of students' achievements, stimulated them, fostered competition and made them overcome shortcomings.

And a final recurring reward which was listed by the respondents was scholarships or discounts in fees. The researcher is of the opinion that in this time of uncertainty of parents' jobs and loss of income, students may be anxious with the continuity of their studies. However, some universities already have policies in place to help students with high CGPAs from low-income families (Omeje & Abugu, 2015) by giving them financial aid, although there could be discounts given from semester to semester.

All the rewards ranked and listed as meaningful seem to align with Maslow's hierarchy of needs. If students are to be motivated to learn, their needs have to be met from the lowest; physiological needs, to the highest; esteem and self-actualisation (Crump 1995). Rewards in the form of gifts and scholarship could be related to physiological needs and maybe even safety and security. College or university students may not all be from affluent families and especially in

these uncertain times, anxiety can arise from wondering where the next meal will come from, or how to get their hands on books and even stationery.

Compliments, recognition and awards are just some of the simple ways instructors can instil confidence in students. Instructors can also show concern which can lift the morale of students who come into classrooms from different backgrounds and experiences.

Research question 2:

2. Does gender determine the type of rewards students find meaningful?

The findings from the close-ended question as seen in Table 4, show that there were only 4 rewards where the percentage of males that found them to be meaningful was higher than females. However, the percentages were just 2%-6.1% higher. The rewards were; more time to complete assignments, rewards in the form of food, permission to not attend tutorials and permission to not complete non-graded assignments.

The highest difference in percentage favouring the males was 6.1% and it was for the food reward. More male respondents preferred food as a reward than females. In a study conducted by Gilboord (2010), the results showed that females preferred food reward more than the males because the reward was a type of sweet food. She cited previous studies that stated males preferred salty food and females preferred sweet food. So, in this study the reward was fast food which could be categorised as savoury food, therefore it is in line with findings of food preferences between males and females. The findings in this study also supports the findings of study conducted among Malaysian adolescents (Johari et.al, 2020). In their study they found that more female respondents preferred eating home cooked meals than fast food.

*Table 4: Rewards listed according to gender*

Rewards	Male		Female	
	N	%	N	%
Recognition	4	20	16	80
Consultation & Feedback	2	14.29	12	85.71
Extra marks	4	28.57	10	71.43
Scholarships	5	55.56	4	44.44
Vouchers/ Gifts/Money	8	34.78	15	65.22
Extra time	4	66.67	2	33.33
Break Time	2	28.57	5	71.43
Show concern	-	-	5	100

In this study the findings show that the largest difference between the genders was for the reward on consultations with female respondents showing a higher percentage in finding this reward meaningful at 88.6% and males at 78.7%. Consultations between teacher and student is where the learner can get clarifications for assignments or the module taught. The findings support

the findings of Corbin, (2017), which states that male learners prefer to study on their own in contrast to female students who like to get the most out of what they are studying.

Both the genders found getting personal feedback from instructors to be the most meaningful reward; females at 94.9% and male at 88.5%. This is interesting because although the male respondents rate this reward highly, they would prefer not to seek the instructor out for consultation. This too could support the study by Corbin (2017), that male students are independent learners.

Some of the open-ended responses support the findings of the close-ended question in that a few rewards mentioned by respondents were the same. There were only 3 rewards that were not mentioned in the close-ended question; scholarships, break time and show of concern.

This study shows that females deem the need for recognition (80%) and concern shown (100%) to them as a reward that will motivate them academically.

*Be understanding when a student can't complete their assessment when they are having a bad mental health and not be mad at them (S35)*

*Show more concerns to students, like remind them the due date of assignments earlier (S27)*

This finding implies that female students may not seem to find their instructors to be supportive enough. A reason for this could be that classes have been online and instructors have been struggling to adapt to online teaching and struggling to also support their students emotionally. This finding does not support the findings of Katz (2016), who conducted a study on students' perception of teachers' behaviours and found that female students perceived their teachers as supportive. However, the study also shows that students' perception of supportive behaviour of teachers is central to motivation for both genders.

The percentage of female respondents who stated that they thought having more break time a meaningful reward, was 71.43% compared to males at 28.57%. This could be due to an increase in reported negative impacts and difficulties faced by females during the pandemic (Li et al., 2021; Patias et al., 2021; Prowse et al., 2021). These studies have found that females more than males have higher stress levels. Therefore instructors, knowing this, should allow for more breaks and between classes and going a step further, they should help students to cope with the stress.

The final reward mentioned by respondents was scholarships. The difference between the percentage of males and females was about 11% with males at 55.55%. The researchers of this study look at scholarship as a form as monetary reward. The need for a scholarship as reward for doing well in class is seen as motivation for the male respondents, is supported by a study conducted by Sittenthaler and Mohnen (2020) on employees in a tournament setting. Their study revealed that males perform better than females when there is a monetary reward because there is an element of competitiveness and stress which puts females off and makes their male counterparts put in more effort.

## CONCLUSION

This exploratory paper was written to find out what kind of redeemable rewards university students would find meaningful and relevant to be exchanged for points during a gamified module.

Knowing how to motivate students during this period of online learning is essential as this would motivate them to work harder. Knowing what rewards would motivate them, would also increase the engagement of students in the course and help with retention of knowledge and reduction of attrition. The rewards should also be suitable to the gender of students as not all rewards are as appealing to both genders.

For future studies, the researchers recommend a similar study which includes an interview to enable respondents to be questioned further on their choice of rewards. Another recommendation is that the study be conducted on various age groups to investigate if age is also a factor that can account for reasons for choice of rewards and which reward would be suitable for students of different ages.

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