

The role of motivation camp towards academic performance and time management among first year biomedical science students

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ABSTRACT

Background: Time management is one of the factors that may influence students' academic performance in university. A cross-sectional study was carried out to evaluate the role of motivation camp programme towards time management among first-year undergraduate students of the Biomedical Science Programme, Universiti Kebangsaan Malaysia (UKM) by using a questionnaire. **Methods:** A total of 32 students was categorized into group 1 and group 2 (n=16 per group), with group 1 is students who did not attend the motivational camp and group2 participated in the camp. Their academic performance in terms of Grade Point Average (GPA) was evaluated in semester 1 and 2 of the 2017/2018 session. A correlation test between total study hours and GPA in both semesters showed a weak correlation for group1 and group2. Independent T-test was also carried out to compare time management and GPA. **Results:** There is no significant difference between group1 and group2 in time planning; however, there is a significant difference ($p < 0.05$) between both groups in time attitude. Lastly, though all students in group2 showed an increment in GPA, Fisher's test revealed no association between motivation camp and GPA. **Discussion and Conclusion:** This study indicated that by having the motivational camp alone, it may not warrant the improvement in time management skill and academic performance among the first-year undergraduate students of Biomedical Science, UKM. Data from this study can help educators to improve the programme with post-camp activities to enhance the outcomes.

Keywords: Academic performance; university; motivation camp; biomedical science; time management

INTRODUCTION

The beginning of the university life can be challenging and difficult for some students as they are required to adjust a different learning style and new environment. A transition period of significant change, moving from school to university can also be a full of uncertainties which leads to stress. Therefore, academic assistance and supports are often required at transition points from high school to undergraduate training and from undergraduate to graduate or professional training (White, 2007). Academic assistance and support for a student can be formal or informal. Our previous finding shows a system such as motivational talk conducted by the faculty management can be one of the formal intervention forms, whereas social network support can be the informal form of intervention (Masre et al., 2018).

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Academic performance plays a vital role for a student aiming to score excellently in their Cumulative Grade Point Average (CGPA). The performance of the students in the higher institution in Malaysia is measured using Grade Point Average (GPA) which will be cumulated from the first semester until they finished all the required courses (Othman et al., 2011). However, many factors could act as an obstacle and catalyst to students in achieving a high CGPA that represent their overall academic achievement (Remali et al., 2013). It is also believed that a poor academic performance in higher institutions may result in students becoming demotivated (Masre et al., 2018).

Time management plays a substantial role in influencing a student's academic performance and achievements (Nasrullah & Khan, 2015; Azmi et al., 2014). A research conducted by Plant et al. (2005) has investigated the effect of time spent studying on student's academic performance, and they found that total study time only arises as an essential effector of CGPA when the quality of study is taken into consideration such as the environment of study and proper time planning. However, the road to achievement requires effective effort, such as proper time management. Hence, time management is essential and only possible through good self-motivation and self-ability (Claessens et al., 2009). Although there is no definite answer for the right time management, yet, it is important to assess and explore on how students in the university manage their time in terms of time planning and time attitude. It is reported that time planning and time attitude included as the main factors associated with time management that reflect for effective performance (Hellsten 2012). According to Wilson (2009), students' participation in extracurricular activities can be beneficial for students, including having better grades or higher standardized test scores and higher educational attainment. Students who participate more in extracurricular activities such as in sports are believed to score better in their academic performance in term of GPA (Alahmed, Yusof, & Shah, 2016; Craft, 2012).

According to Kaplan-Sayi (2017), motivation camp is one of the most popular activities that held among academic schools or colleges with the aim of learning and improving skills, and it acts as a booster for students to have higher interest in their studies. Moreover, new knowledge and different skills gained among students through the motivation camp such as proper time management, effective social communication or interaction, and creative expression of opinions will benefit them (American Camp Association, 2017).

Most of the students in the first year at university are not well prepared for new challenge such as homesickness, difficulties in adjusting to their new environment, discomfort and distress due to improper time management skills. All these consequences are believed to cause students to have underperformed GPA. As a result, motivation camp is conducted to help them. This study is carried out mainly to evaluate the role of motivation camp programme towards time management among the first-year undergraduate students of the Biomedical Science Programme, Universiti Kebangsaan Malaysia, UKM.

METHODS

This study employed a cross-sectional design. The sample population was the year one undergraduate students from the Biomedical Science Programme, Faculty of Health Science, Universiti Kebangsaan Malaysia (UKM), Session 2017/2018. Total of 32 students was selected in this study and the sample size was calculated by using G Power 3.1 software with power (0.80) and effect size: 0.5 (Faul et al. 2009). Participants were recruited using stratified random sampling. All students were stratified into two groups (n= 16 per group), in which students with 3.00 GPA and above as the group 1 (no motivation camp) and students with less than 3.00 GPA as the group 2 (attend the motivation camp). From each group, the students were then randomly selected. The inclusion factor in this study was the year 1 students from Biomedical Science session 2018/2019 with GPA below 3.00 at admission. Meanwhile, the exclusion factor was students that did not attend the motivation camp. The motivation camp was held at Pusat

Latihan Khidmat Masyarakat, Tanjung Karang from 23 to 24 Mac 2018. Throughout the camp, the students were exposed to motivational talk, alumni and facilitator sharing session, self-inspiration and reflection session as well as physical activities such as marching and treasure hunt.

Information about the study was given to the students. A written consent was obtained from each student prior to the study and the study complied with the guidelines of the Helsinki declaration. A set of questionnaire extracted from a past study (Razali et al., 2018) was used for data collection. The questionnaire has three sections which consist of socio-demographic, the academic performance of the students and time management. In the socio-demographic section, the respondents were asked about their name, gender, age, race, marital status, expenses per months, and accommodation. For academic performance section, they were asked about the source of their allowance and how many hours they spent to do revision in a week for both semesters. Time management is measured by the number of hours that students spent on their extracurricular activities. This component is captured in the last section of the questionnaire. Likert scale question that consists of 13 questions, were divided into two main categories according to their time planning and time attitude.

Statistical Analysis

Data was analysed with IBM SPSS Statistics version 25. Data on GPA, extracurricular activities and study hours of first semester and second semester between both groups were descriptively analysed. Pearson correlation test was performed to determine the correlation between the study hours and extracurricular activities with a GPA for the first and second semesters. The independent t-test was used to compare the difference between both groups in time management and GPA. Lastly, the Fisher's exact test was used to compare the relationship of the effect of motivational camp, extra-curricular activities and hours of study with GPA. All data were presented as mean±standard error of mean (SEM) with $p < 0.05$ as the level of significance.

RESULTS

Demographic data

Out of 32 participants, 25 are females (78.1%) and 7 are males (21.9%). Majority of the participants were Malay (78.1%, n=25) and aged between 20 and 22 (90.6%, n=29). Aside from that, the expenses per month recorded by the students were mostly less than RM500 (65.6%, n=21), and majority of them were sponsored by their family (34.4%, n=11). Most of the participants are staying in student residential college (87.5%, n=28), which is typical for first-year students. The demographic data of the students are summarized in Table 1.

Measurement of Extra-Curricular Activities, Study Hours and GPA

For time management, in term of extracurricular activities (table 2) in semester one, most students (62.5%, n=10) in group 1 and 2 participated in 2 to 3 activities. While in semester two, the percentage of students' participation in 2 to 3 activities decreased to 50% (n=8) and 18.8% (n=3) in group 1 and group 2, respectively. Interestingly, more students opted for minimal extracurricular participation (0-1 category) as they progress to semester 2 with 43.8% (n=7) in group 1 and 56.3% (n=9) in group 2 (table 2).

For hours in extracurricular activities per week (semester one), most students in group 1 and 2 spent 2 to 4 hours in the participated activities with 31.3% (n=5) and 56.3% (n=9), respectively. In contrast to semester one, in semester two, most students reduced the hours spent in extracurricular activities to less than one hour with 31.3% (n=5, group 1) and 37.5% (n=6, group 2). Based on table 2, for study hours in semester one and two, data showed that most students in group 1 spent 6 hours in studying lessons. This situation is different from students in group 2 who spent 2 to 4 hours to study in both semesters.

Figure 1 below showed the comparison of the mean GPA between both groups in semester one and two. From Figure 1, both groups

showed an increment of mean GPA in semester 2. However, the data indicate that there was a slight increase of only 0.1 GPA for group 1. Whilst a bigger increment of 0.6 mean GPA from semester one to semester two was shown in group 2 (Figure 1). The bigger increment of GPA in group 2 as compared to group 1 may indicate a positive outcome from the motivation camp.

Table 1: Demographic data of participants

Characteristics	Frequency (f)	Percentage (%)
Gender		
Female	25	78.1
Male	7	21.9
Age		
20-22	29	90.6
23-24	1	3.1
25-27	2	6.3
Ethnicity		
Malay	25	78.1
Indian	2	6.3
Chinese	2	6.3
Others	3	9.4
Monthly Expenses		
Below RM 500	21	65.6
RM500 - RM1000	10	31.3
RM1500 - RM2000	1	3.1
Source of Allowance		
Family	11	34.4
Loan	3	9.4
Sponsorship	1	3.1
Family and Loan	8	25.0
Family and Sponsorship	4	12.5
Family, Self-earning and Loan	4	12.5
Family and Self-earning	1	3.1
Accommodation		
Student residential college	28	87.5
Non-residential college	4	12.5

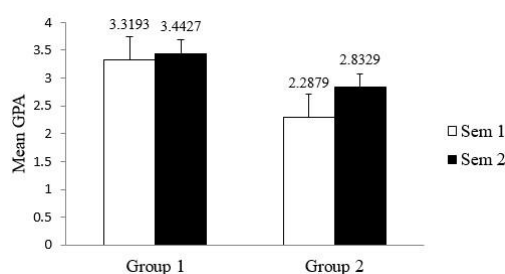


Figure 1: Comparison of mean of GPA between both groups in Semester 1 and Semester 2.

Time Management

Independent T-test is used to compare the effect of time management in terms of their time planning and time attitude between group 1 and group 2. From Table 3, there is no significant difference ($p > 0.05$) for time planning between both groups. It may be due to students who are not aware of the importance of planning their schedule. Meanwhile, both groups showed a significant difference ($p < 0.05$) in time attitude. Different students have varied ways of managing their revision and leisure time, which frequently depend on their personalities and attitude towards time.

Correlation of Study Hours and Extracurricular Activities with GPA

From Table 4, group 1 showed a negative correlation ($r = -0.028$ sem 1, $r = -0.113$ sem 2), whilst group 2 showed a positive correlation ($r = 0.029$ sem 1, $r = 0.034$ sem 2) between study hours and GPA in both semester 1 and 2. However, both groups have weak correlations (below 0.3). Thus, this data indicates that there was little to no linear association between study hours and GPA in both groups. Table 4 also revealed that group 1 has a positive correlation between extra-curricular activity and GPA during semester 1 ($r = 0.294$) and semester 2 ($r = 0.302$). Moreover, group 2 showed a weak (below 0.3) positive correlation in semester 1 ($r = 0.201$) and a weak negative correlation in semester 2 ($r = -0.133$). Our findings indicate that there was a weak association between hours spending on extracurricular activity and GPA in group 1, but not in the group 2.

Table 3: Effect of time management between Group1 and Group 2

Parameters	Mean \pm SD		p-value
	Group1	Group2	
Time planning	15.94 \pm 1.88	14.69 \pm 2.30	$p = 0.103$
Time attitude	25.38 \pm 2.45	23.13 \pm 3.61	$p = 0.048$

Table 4: Correlation between study hours and extracurricular activities with GPA of Semester 1 and 2

Correlation between 2 variables	Groups	GPA	
		Sem 1	Sem 2
Study Hours	Group 1	-0.028	-0.113
	Group 2	0.029	0.034
Hours Spending on Extra-Curricular Activities	Group 1	0.294	0.302
	Group 2	0.201	-0.133

Relationship of Motivational Camp, Extra-Curricular Activities and Study Hours with GPA

Table 5 showed the relationships of motivational camp, extra-curricular activities, and study hours toward GPA. First, for the relationship between the motivational camp and GPA, all students (100%) in group 2 showed an increment of GPA from semester one to semester two. Moreover, group 2 showed zero drop in GPA as compared to group 1 (18.8%) which may be due to the participation of group 2 in the motivation camp. However, although the students' involvement in a motivational camp showed a total increment of GPA, yet, data from the Fisher's test revealed that there was no significant ($p > 0.05$) association between the motivational camp's participation and students' GPA in both groups.

Table 5: The relationships between motivational camp, extra-curricular activities, study hours toward GPA

Groups	GPA	
	Increment	Decrement
Motivation camp		
Group1	81.3%	18.8%
Group2	100%	0%
Fisher's Exact Test (P)	0.226	
Involvement in extra-curricular activities		
< 5 hours	100%	0%
> 5 hours	0%	100%
Fisher's Exact Test (P)	0.000	
Study Hours		
< 5 hours	100%	0%
> 5 hours	83.3%	16.7%
Fisher's Exact Test (P)	0.238	

Table 2: Extracurricular activities and study hours in semester 1 and 2

Characteristics	Categories	Frequency (f)		Percentage (%)	
		Group1	Group2	Group1	Group2
Number of Extracurricular activities in Sem 1	0-1	4	2	25.0	12.5
	2-3	10	10	62.5	62.5
	4-5	2	2	12.5	12.5
	> 5	0	2	0	12.5
Number of Extracurricular activities in Sem 2	0-1	7	9	43.8	56.3
	2-3	8	3	50.0	18.8
	4-5	1	2	6.3	12.5
	> 5	0	2	0	12.5
Hours of Extracurricular activities in Sem 1	< 1 hour	4	3	25.0	18.8
	2-4 hours	5	9	31.3	56.3
	5-6 hours	4	3	25.0	18.8
	> 6 hours	3	1	18.8	6.3
Hours of Extracurricular activities in Sem 2	< 1 hour	5	6	31.3	37.5
	2-4 hours	5	5	31.3	31.3
	5-6 hours	3	3	18.8	18.8
	> 6 hours	3	2	18.8	12.5
Study Hours in Sem 1	< 1 hour	0	1	0	6.2
	2-4 hours	5	8	31.3	50.0
	5-6 hours	5	5	31.3	31.3
	> 6 hours	6	2	37.5	12.5
Study Hours in Sem 2	< 1 hour	0	1	0	6.2
	2-4 hours	2	6	12.5	43.8
	5-6 hours	8	5	50.0	37.5
	> 6 hours	5	2	37.5	12.5

Second, the relationship between extra-curricular activities and GPA was demonstrated in Table 5. From Table 5, students that spend less than 5 hours in extra-curricular activities demonstrated a 100% increment of GPA as compared to a 100% reduction of GPA when students spend more than 5 hours in extra-curricular activities. Statistical analysis showed a significant difference ($p < 0.05$) between hours spent on extra-curricular activities and GPA. This finding indicates that students' academic performance is influenced by the hours spent on extra-curricular activities which can be reflected through their percentage of increment and decrement of GPA.

Third, the relationship between study hours and GPA was also revealed in Table 5. The baseline for optimum study hours was set at 5 hours and students who studied more than this baseline showed 83.3% increment of GPA and 16.7% decrement of GPA. On the other hand, students who studied less than 5 hours showed a 100% increment of GPA with zero drops in GPA. Although this finding indicates that less than 5 hours of study may reflect in a 100% increment of GPA among students, however, Fisher's exact test showed that there was no significant ($p > 0.05$) difference between study hours and GPA.

DISCUSSION

Outstanding accomplishment in academic performance in terms of GPA warrants a secured trajectory to the students in their forthcoming career (Othman et al., 2011). Grade point average or GPA is one of the most critical parameters used for the undergraduate students' performance in our education system (Johnson, 1997). In this study, GPA students of the group 1 and the group 2 were measured for semester 1 and semester 2. For the group 2, they were invited to attend a motivational camp which was organized by the Programme of Biomedical Sciences, Universiti Kebangsaan Malaysia.

Based on the outcome of this study, both groups showed an increment of GPA from semester one to semester two. This increment of GPA may be driven by the intrinsic motivation in the students to succeed or from family support. This finding was in accordance with our previous research on the second and third-year students of Biomedical Science which showed an increment of GPA with or without the participation in motivation camp (Masre et al., 2018). In this study, there was no significant difference in the students' academic performance towards GPA for group 1 and group 2. Our finding is contrary to the data presented by Othman et al. (2011), which they proved in their study, the participation in a motivational programme was impactful for

undergraduate students. The reason may be due to no additional group was involved in the study by Othman et al. (2011) as compared to the present study that included a group of students that did not participate in the motivation camp.

This study revealed no significant relationship between motivation camp and academic performance. Our results supported the study by Davis (2009) in which there was no significant correlation between motivation and academic performance. Davis (2009) mentioned in his study, regardless of motivation, students' academic performance could be influenced when they were socially alienated due to ethnic stereotypes in the educational setting. In the study, Davis (2009) suggested understanding the motivation that is required for the students through multidimensional approaches such as integration of attribution theory and academic self-efficacy that can better elucidates students' academic achievement.

Proper time management practises giving an enormous advantage in helping students to have a better lifestyle and able to excel in their academic performance (Miqdadi et al., 2014). Previous study showed that time management plays a vital role in improving students' academic performance and achievement (Nasrullah & Khan, 2015). However, the outcome of the present study showed no significant difference for the group 1 and group 2 in term of time planning. The result was contradicted with the study conducted by Nirogini & Anthony (2017) stated that proper management of time was significant to determine an excellent academic grade. The difference might be due to the sample size of the present study which was from year one biomedical science students in the Faculty of Health Sciences, Universiti Kebangsaan Malaysia, whereas Nirogini & Anthony (2017) was a large scale study consisted of students from 413 different universities. However, time planning is believed to be influenced by some factors such as interruption, distraction and procrastination. This statement is supported by the study conducted by Miqdadi et al. (2014) showing that students with GPA 3.0 spending a lot of time in social network primarily through mobile phones. The time usage is also spent on music and socializing with friends while revising without proper time planning. In term of time attitude, this study showed that there was a significant difference ($p < 0.05$) between group 1 and group 2. This result supported the study by Alshaya et al. (2017), which stated that students who manage their time wisely and being aware the importance of time attitude could achieve better results as compared to those who have poor time management.

This current study indicates a weak correlation for both groups

between the study hours and GPA, which means that there was almost no association connecting how many hours they spent in revision and the GPA results. Our findings contradict to the study by Ukpong & George (2013), where they indicate that hours spent studying could influence the GPA. Ukpong & George (2013) stated that students who study in long hours tend to perform better than those who study in a short time. Furthermore, a past study conducted by Thibodeaux et al. (2017) showed that the students who studied less than 5 hours per week tend to gain lower GPA results as compared to the students who spent 5 hours per week. However, again, the relationship effect between study hours and GPA in this study showed no significant difference ($p > 0.05$). The present findings supported the research by Nonis & Hudson (2006), which revealed that the number of hours spent on academic activities has no direct influence on students' academic performance.

According to Craft (2012), students who are actively participating in extra-curricular activities achieved higher academic performances in term of GPA than students who did not participate in any extra-curricular activities. Also, Wilson (2009) stated that students who are over-scheduled in too many activities may find the benefits by gaining better academic performance. However, the present study contradicts the findings of Craft (2012) and Wilson (2009). Our data showed a significant difference ($p < 0.05$) in the relationship effect between hours spent on extra-curricular activities and GPA, from Fisher's exact test. The outcome of this study showed that the students who were involved in extracurricular activities for less than five hours per week demonstrated a total increment in their GPA. In contrast, the students who were involved in extracurricular activities for more than five hours per week demonstrated decrement in their GPA. These may indicate that minimal time spent in extra-curricular activities could also produce a better academic result.

Study in the past has shown that students who joined many extra-curricular activities may lead to a negative impact, such as losing focus on their studies (Reeves, 2008). Over-scheduling may cause students to become irritable and lethargic, pay less attention in class and spend less time preparing for a task assigned. Moreover, research conducted by Tanner (2017) stated that too much time spent in extracurricular activities may cause adverse effects where the students invest less time and less energy in the study. One of the limitations in this study was that the sample size was too small, which do not represent the whole population from first-year students of the Biomedical Science Programme.

CONCLUSION

In conclusion, the motivation camp does have an important role in improving the academic performance and time management of students. However, there was no significant difference between group 1 and group 2 with GPA despite the increment of GPA. The result may support the view that the motivational camp alone may not be sufficient for the students in improving their GPA significantly. Above all, the motivational camp could be carried out continuously in the future as a part of learning intervention method for university students but with some new improvement and implementation on additional activities of post-camp such as mentoring program, spiritual development and reflective skills (Sham et al., 2014; Siraj et al., 2014).

DISCLOSURES

The authors declare that there is no conflict of interest.

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