Motivations and Academic Performance of Dentistry Students

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ABSTRACT

Academic performance of students is the end-product or outcome of all educational endeavors. The outcome based paradigm of education in the 21st century has continued to challenge all those involved in the educational system. With the increasing diversity of students pursuing the dentistry program, there is a growing interest in the factors predicting academic performance. This study was conducted to determine the relationship between academic performance and motivation, since motivation has been identified as one of the potent factors that affect academic performance. This study made use of descriptive- correlational research design. The students of the School of Dentistry, University of Baguio, who were enrolled during the first semester of SY 2019-2020 composed the population of the study. A total of 490 Dentistry students composed the population of the study. The data-gathering tool for motivation was the university student motivation questionnaire, which was validated and reliability-tested. The grade point average (GPA) of the students was used to determine their level of academic performance. The very high level of motivation of the Dentistry students reflects a purposeful motive-driven school environment in the School of Dentistry. The good level of academic performance indicates that the dentistry students are in the right direction towards the completion of their degree program, however, the level of good is not enough, and must be raised to a higher level. The slight level of coefficient of correlation between motivation and academic performance indicates that there exists a weak relationship between motivation and academic performance. As such, a high level of motivation does not necessarily produce a high level of academic performance.

Keywords: Motivation, Academic Performance, Intrinsic, Extrinsic, Social Cognitive Theory, Self-determination Theory

THE PROBLEM

Background of the Study

In today's information age, the issue of academic achievement or performance has continued to exert pressure among educational stakeholders: parents, students, teachers, administrators and the entire educational system. This is so because academic performance is the outcome or end-product of all educational endeavors. The main concern of all educational efforts is to see that the learner achieves educational success.

With the increasing diversity of students taking up dentistry, there is a growing interest in the factors predicting academic performance. This study is an investigation of motivation as a predictor of academic performance of dentistry students in the University of Baguio. Identifying the factors that influence academic performance can improve the targeting of interventions and support services for students at risk of academic problem.

In the University of Baguio School of Dentistry, a lot of freshman students enter the school as a university scholar. And as they advance to a higher year level, the number of these university scholars decreases.

Sharma (2005) contends that there is a tremendous pressure on students to earn good grades because academic performance is assumed to have predictive value toward school success as well as career success later. That is why parents desire that their children achieve high academic performance in their learning endeavors.

The importance of academic performance has raised several queries among educational researchers and educators, such as why does one student perform better than another? Regarding this query, Sawar, Bashir, Khan and Khan (2009) pointed out the need to initiate radical changes on what and how students learn and why students are not performing as per expectations.

Many factors interplay in the learning process. These factors need to be managed by all who are concerned with academic performance of students.

Academic performance, as viewed by Bashir and Matto (2012), is the measure of how much knowledge the individual has acquired from school or instruction.

How a student regards his studies greatly determines his/her level of academic achievement (Ebele & Olafu, 2017). The student's serious regard for his studies and learning activities is referred to as authentic student engagement.

Authentic student engagement leads to higher academic achievement throughout student life (Zyngier, 2007). Student engagement in learning is a means by which students achieve sound academic outcomes (Ryan & Deci, 2009). In this regard, Russell, Ainley, and Frydenberg (2005) asserted that for higher learning outcomes students must engage in learning authentically. This assertion is shared strongly by Schlechty (2011).

Student engagement is characterized by consistent involvement in learning activities despite challenges and obstacles; student willingness, need, desire, and active participation; and be successful in the learning process. Success in the learning process dovetails with high academic achievement.

One important factor that is positively associated with student engagement toward high level of academic performance is motivation. A student who is highly motivated is highly engaged and consequently, achieves high academic performance.

According to Ryan and Deci (2009), to be motivated means to be moved to do something. In the classroom setting, student motivation refers to the degree to which a student puts effort into the focus on learning in order to achieve successful outcomes.

It is thus remarkably noted that effective studying requires sustained and deliberate effort of the student, and knowledge of appropriate studying techniques and practices as well as self-regulation and sense of responsibility for and value in one's own learning (Crede and Kuncel, 2008).

These considerations underscore the significance of this study.

Academic Performance and Motivation

The study of Afsal, Ali, Khan, and Hamid (2010) examined the influence of student motivation on academic performance. The study found positive and mutually causal relationship between student's motivation and student's academic performance. This relationship is reciprocal. This means that students who are more motivated perform better and students who perform better become more motivated. The study also revealed that students who are intrinsically motivated perform much better academically than students who are extrinsically motivated.

The study of Haider, Qureshi, Pirzada, and Shahzadi (2015) determined the relationship between motivation and academic performance. The study also affirms that intrinsic motivation has greater impact on academic performance than extrinsic motivation.

Gbollie and Keamu (2017), bared that lack of motivation is considered as one of the factors that causes low academic performance. As a result the students are unable to sustain their interest, enthusiasm, keenness and commitment towards learning.

Using extrinsic motivation to push students toward wanting to achieve can be effective. They can quickly lose interest in both promised rewards and punishment.

In their study, Gbollie and Keamu (2017) found out that the downward trend in Liberian students' academic performance level is due to the students' self-efficacy level for learning and high extrinsic motivation. The high extrinsic motivation of the students is influenced by external factors. This indicates that their devotion to learning the different subjects is because of their desire for rewards and fear of penalty from teachers and parents, and not based on their inner aspirations.

Humaida (2012) conducted a study on motivation to learn English among college students in Omdurman Islamic University in Sudan. The results showed that the English learners were intrinsically motivated. The study concluded that it cannot be disputed that motivation is an important variable in successful second language acquisition. As such, making learners recognize a real need to accomplish learning goals and providing them with the motivation to learn is one of the best steps taken to facilitate learning.

Alderman (2004) claims that students who have optimum motivation have an edge because they have adaptive attitudes and strategies, such as intrinsic interest, goal setting, and self-monitoring. Dornyei (2001) shares this view and further asserts that motivation explains why people decide to do something, how hard they are going to pursue it, and how long they are willing to sustain the learning activity. In other words, motivation is what gets one going, and determines where one is trying to go or what one is trying to achieve. Regarding this, Yukselturk and Bulut (2007) assert that motivational beliefs are very essential to the academic achievement of students because they help to determine the extent to which students will consider, value, put in effort, and show interest in the task.

Academic Performance

In their study, Shahzadi and Ahmad (2011) concluded that the better the study habits, the higher the academic interaction which ultimately leads to higher academic performance. This is supported by the earlier findings of Aluja and Blanch (2004).

The aforementioned considerations motivated the researcher to conduct a study on motivation and academic performance of students of the School of Dentistry, University of Baguio.

The results of the study will benefit students, teachers, administrators, parents, educational researchers, and the researcher himself. An output could be based on the result of the study by means of manuals or pamphlets which could be used not only in the school of dentistry but also in other schools of University of Baguio.

The students will benefit from the results of this study in terms of insights into motivational factors that will help them improve their academic performance.

The teachers will benefit from the results of this study by providing them with opportunities to guide their students so they can improve their academic performance.

The parents, who of course, desire that their children achieve high academically, will be guided by the results of this study in their active involvement in the learning activities of their children. Independent study is done at home through parental guidance.

Administrators will be guided by the results of this study since learning institutions are expected to direct their attention to the creation and implementation of strategies that will sustain the students' motivation to study and improve their academic performance.

Educational researchers will benefit from the results of this study in terms of added literature on student motivation and academic performance.

The researcher himself will benefit from the conduct of this study through his first-hand exposure to the intricacies of the research process and better understanding of the role of motivation in improving the students' academic performance.

Theoretical/Conceptual Framework

The following theories and concepts serve as anchor in the analysis of the influence of motivation and how it affects students' academic performance.

Social Cognitive Theory

The social cognitive theory propounded by Bandura (cited in Arends, 2012; also cited in Siahi and Maiyo, 2015) lays emphasis on one's cognition. It suggests that the mind is an active force that constructs one's reality, encodes information, performs behavior on the basis of values and expectations and imposes structure on its own actions. It is through an understanding of the processes involved in one's construction of reality that enables human behavior to be understood, predicted and changed. In view of this theory, the student's academic performance is a product of interaction of his personality and study motivation. This theory supports the assumption that motivation influences academic achievement.

In relation to the social cognitive theory, Crow and Crow (2007) states that study requires a purpose and what one learns as a result of study depends largely upon the degree to which one succeeds in achieving that aim or purpose.

The role of motivation in learning, as the theme of Bandura's social cognitive theory, asserts that motivation is the product of two things: an individual's expectations about his chances of reaching a particular goal and the degree of value or satisfaction that will accrue if he achieves the goal.

Self Determination Theory (SDT)

The SDT is a student motivation theory espoused by Ryan and Deci (2011). The SDT states that the quality of motivation is more significant than the quantity of motivation. Ryan and Deci (2011) classify students' motivation into two dimensions: intrinsic motivation and extrinsic motivation. The components for each dimension are graphically presented in Figure 1.

Intrinsic Motivation

When a person enjoys a work or activity, he sees it as an opportunity to learn and participate without the sake of any external reward, the person is motivated intrinsically (Coon & Mitterer, 2010). When someone performs certain activities for internal interest and satisfaction, it manifests intrinsic motivation (Brown, 2007). In the educational setting, intrinsic motivation is the type of
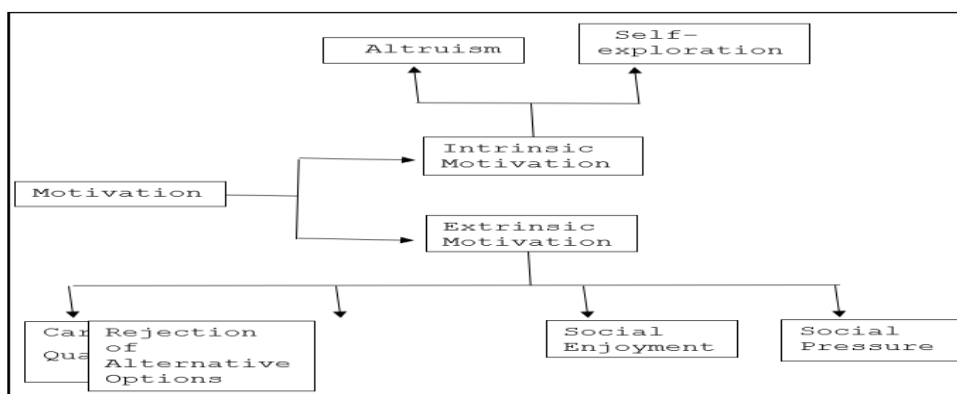

Figure 1. Self-Determination Theory of Motivation

motivation in which the student has genuine and primary interest in an activity or subject.

There are two factors in intrinsic motivation: self-exploration and altruism.

Self-exploration entails understanding oneself, exploring new ideas, challenging oneself to perform well, aspiring for personal growth and development, and having a genuine love for learning. For example: "I attend university because I have a genuine interest in dental medicine."

Altruism entails genuine willingness to help others, wanting to contribute to society, wanting to help solve society's problems, wanting to improve the world situation and wanting to be more useful to society. For example, a student states: "I attend university and want to be a dentist because I want to be more useful to society."

Extrinsic Motivation

Extrinsic motivation is defined as the tendency to perform activities for known external rewards (Brown 2007). Extrinsic motivation refers to behavior that is driven by external rewards such as money, fame, grades, praise and other outside matters.

Sources of Extrinsic Motivation

Rejection of alternative options. Some students do study to abstain from working because they have no other choice; to avoid being unemployed; because it keeps one busy or having something to do; because there is no better option.

Career and qualifications. Students study to gain valuable skills for a career; to enhance job prospects; in order to get qualification; to set-up one's future career; to get a better job.

Social enjoyment. Students study because the university is a fun place to be; because of the social life; because the student enjoys the social environment; because of social opportunities; because school is a great place to develop friendships.

Social pressure. Students go to school because others expect them to get a degree; because other people told them to attend college; because parents will be disappointed if they do not pursue their studies; because attending school seems to be the recommended thing to do; because of social expectations from people around them.

Paradigm of the Study

This study makes use of the Independent Variable and Dependent Variable (IVDV) research paradigm.

The independent variable for the study is the level of motivation of dentistry students. The moderator variable includes year level of dentistry students in University of Baguio. This factor may affect the dependent variable, the academic performance of the students. And this was the finding of the study of Afsal et al. (2010), that every student has diversified experience of knowledge, abilities, talents and aspirations and come from different social, regional and political backgrounds which may affect their motivation to learn.
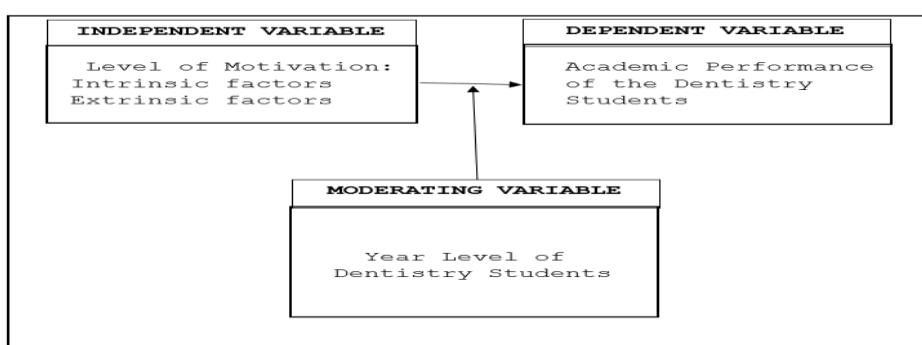

Figure 2. Paradigm of the Study

Statement of the Problem and Hypothesis

The major purpose of this study was to determine the relationship between the Dentistry students' motivation and academic performance.

Specifically, the answers to the following problems were sought:

What is the level of motivation of the students

along:

Intrinsic factors

Extrinsic factors?

Is there a significant difference in the level of motivation according to year level?

Hypothesis: The students do not significantly differ in their level of motivation according to year level.

What is the level of academic performance of the students?

Do the students significantly differ in their level of academic performance by year level?

Hypothesis: The students do not significantly differ in their level of academic performance by year level.

Is there a significant relationship between the students' level of motivation and their level of academic performance?

Hypothesis: There is no significant relationship between motivation and their level of academic performance.

RESEARCH DESIGN AND METHODOLOGY

This chapter focused on the research design, population and locale, data-gathering tools, data-gathering procedures, treatment of data and ethical considerations.

Research Design

This study utilized a descriptive correlation design wherein it tested and assessed the relationship between motivation and academic performance. The researcher was primarily interested in describing relationships among these two variables, without seeking to establish a causal connection.

Under this design was the gathering of data for the level of motivation through the Student Motivation Questionnaire. Documentary analysis of student's grades provided data for the level of academic performance.

The level of correlation between academic performance and each of the identified motivation correlates was determined through Pearson product moment correlation.

Population and Locale

The students of the School of Dentistry, University of Baguio who were enrolled during the First Semester, School Year 2019-2020 composed the population of the study.

Table 1Population of the Study

Year Level	Number of Students
First Year	181

Second Year	200
Third Year	00
Fourth Year	45
Fifth Year	50
Sixth Year	14
Total	490

Inclusion criteria included the students who agreed to participate and who consented to disclose their grades. Exclusion criterion included the students who declined to participate in the study. Table 1 shows the population of the study in which total enumeration was applied.

The first and second years belong to the new curriculum while the fourth, fifth and sixth years belong to the old curriculum. The transition of the new curriculum from the old curriculum was the reason behind why there are no third year enrollees.

Data Gathering Tools

Student Motivation Questionnaire. This tool was used to gather data to answer specific problem number one which relates to the level of motivation of the students. The questionnaire has a total of 30 items. The items were categorized into: intrinsic factors and extrinsic factors. The items were grouped into six sets. Each set has five items each, representing the intrinsic and extrinsic factors of motivation. The items were adapted from the University Student Motivation and Satisfaction Questionnaire Version 2 (TUSMSQ-Version 2). This was developed by Neil (2004) to measure student's motivation.

Validity of the Questionnaire. The TUSMSQ-Version 2 has been used in previous researches conducted by Ryan and Deci (2011), Afzal, Ali, Khan, and Hamid (2010). As such, the tool is deemed valid.

Reliability of the Questionnaire. The research tool TUSMSQ-2 was subjected to reliability test. Five students were randomly picked from each of the year levels for the reliability test. A total of 25 students composed the reliability test group. These students were not included in the actual population of the study. Cronbach Alpha was used to determine the coefficient of reliability. A coefficient of reliability of 0.728 (high) was obtained. This means the questionnaire is consistent and stable in correlating motivation and academic performance.

Data Gathering Procedures

Before the conduct of the study, the researcher sought permission from the University of Baguio School of Dentistry Dean, allowing the students to read and answer the questionnaire.

The researcher gave consent forms to be signed by the students confirming their participation and disclosing their grades to be used in the study. Included in the consent form is the exclusion of their names in the questionnaire and the utilization of a coded student identification number that provided confidentiality and anonymity.

The researcher asked for permission from the University of Baguio Registrar's office to secure a copy of the Grade Point Average (GPA) of participants from each year level from the first grading of the First Semester of SY 2019-2020 which was the academic performance variable and was determined through documentary analysis.

Data-gathering was done utilizing the Student Motivation Survey that determined the level of motivation.

The reliability-tested and validated questionnaire was administered to the students. The researcher asked the permission from the teachers of the Dentistry students in their subject that allowed the researcher to use 15 minutes of their class session to let the students read and answer the questionnaire.

The accomplished questionnaires were brought to the UB RDC for SPSS processing.

The data were analyzed and interpreted accordingly.

Treatment of Data

The correlation among the variables was determined through Pearson moment correlation and was analyzed using Statistical Package for the Social Sciences.

The level of motivation scale was based on the Likert rating scale with the following interpretation:

Level of Motivation Scale

Weight	Weighted Mean Scale	Qualitative Interpretation/Level	Description/Level
4	3.26 – 4.00	Very Strongly Agree Very Highly Motivated	I TOTALLY agree that the identified reason DEFINITELY motivates me.
3	2.51 – 3.25	Strongly Agree Highly Motivated	I agree to a considerable extent that the identified reason motivates me.
2	1.76 – 2.50	Moderately Agree Moderately Motivated	I partly agree that the identified reason motivates me.
1	1.00 – 1.75	Disagree Not Motivated	I DO NOT agree that the identified reason definitely motivates me.

With respect to academic performance level, the GPA of each student was interpreted as follows:

Level of Academic Performance Scale

Scale	Interpretation/Level	Description
91-99	Excellent	High Achiever
86-90	Very Good	Moderately High Achiever
80-85	Good	Average achiever
75-79	Fair	Low Achiever
74 & below	Poor	Very Low Achiever

The level of academic performance scale was based on the grading system of the School of Dentistry University of Baguio, wherein a grade of 74 and below interprets a failing grade and a poor performance, making the description of a student to be a very low achiever.

Pearson correlation coefficient was done to determine the level of correlation between academic performance and motivation.

The Pearson correlation coefficient is a measure of the strength of a linear association between two variables, which are the level of motivation and academic performance.

With respect to the correlation between motivation and academic performance, the degree of correlation (r)-according to Guilford was used and shown as follows:

Degree of Correlation (r)-according to Guilford

Scale	Interpretation
0.00	No Relationship
±0.01 - ±0.20	Slight Correlation
±0.21 - ±0.40	Low Correlation
±0.41 - ±0.70	Moderate Correlation
±0.71 - ±0.90	High Correlation
±0.91 - ±0.99	Very High Correlation
±1	Perfect Correlation

Ethical Considerations

Before the conduct of the study, permission was obtained from the Dean of School of Dentistry. Prior to the distribution of the questionnaire, permission was obtained from the teachers of the students.

The ethical standards of anonymity, confidentiality, voluntary participation and informed consent were observed. A written consent form was signed by the students confirming their voluntary participation and willingness to disclose their grades. Included in the consent form was the exclusion of their names in the questionnaire and the utilization of a coded student identification number to provide confidentiality and anonymity.

No student was forced or coerced to participate in the study and was given opportunity to withdraw anytime from the study. The results of the study will be disseminated to the participants during the next general assembly of the students. The study will also be presented to the students and faculty during the research colloquium.

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This chapter discusses the presentation and interpretation of the findings regarding the relationship between the dentistry student's academic performance and their motivation.

Level of Motivation of the Students

The first specific problem deals with the level of motivation of the students along two dimensions of factors: intrinsic factors and extrinsic factors.

Intrinsic Motivation

Table 2 presents the level of motivation along intrinsic factors. Two key indicators of intrinsic motivation are altruism and self-exploration. In both altruism and self-exploration, the students very strongly agree to the indicators indicating a very high level of motivation. Regarding Altruism, the students were most motivated by the goal of becoming useful to society. As far as the dentistry course is concerned, future dentists are made aware that dentistry as a profession is service-oriented. Rendering service to dental patients reflects the dentist's usefulness to society. This altruistic attitude is intrinsic in nature because the ideal of

Table 2 Level of Motivation of the Students Along Intrinsic Factors

Indicators	Mean	Std. Deviation	Qualitative Interpretation
Altruism			
1. Because I genuinely want to help others.	3.47	0.66	VSA/VH
2. Because I want to contribute to society.	3.50	0.65	VSA/VH
3. Because I want to help solve society's problem.	3.25	0.72	SA/H
4. Because I want to improve the world situation.	3.30	0.72	VSA/VH
5. because I want to become useful to society.	3.71	1.09	VSA/VH
Area Mean	3.45	0.54	VSA/VH
Self-Exploration			
1. To understand myself better.	3.48	0.72	VSA/VH
2. Because I want to explore new ideas.	3.71	0.55	VSA/VH
3. Because I want to challenge myself.	3.56	0.66	VSA/VH
4. for my personal growth and development.	3.77	0.51	VSA/VH
5. because I love learning.	3.24	0.70	SA/H
AREA MEAN	3.55	0.46	VSA/VH
Over all Mean for Intrinsic Factors	3.50	0.64	VSA/VH

LEGEND: VSA-VERY STRONGLY AGREE/VERY HIGH, SA/H-STRONGLY AGREE/HIGH genuine service is not basically anchored on economic rewards.

As regards to self-exploration, the students were motivated most by the goal of pursuing personal growth and development. This shows that the students are goal-oriented. Their goal is personal growth and development. Goal-oriented students usually possess positive feelings regarding their school experiences. According to Maina (2012), students with positive attitude will be able to dedicate themselves wholeheartedly towards learning and generate the desired academic outcomes.

The overall mean for intrinsic motivation is 3.50, interpreted as very high. This shows that the students were very highly motivated by intrinsic factors. This means that the dentistry students take up tasks for their own interest and for their own learning. In the study of Zyngier (2007), a high level of motivation contributed to

authentic student involvement and predicted that engagement as implicit in active learning where students experience self-motivation, reflective and shared goal setting, and choice.

Comparison of Level of Intrinsic Motivation According to

Year Level

Table 3 presents the level of intrinsic motivation according to year level of the students. All the means of the five-year levels indicate very high level of intrinsic motivation. It is noted however that there is a decreasing trend in the means by year level although the difference is slight. The decreasing trend, although slight, implies that intrinsic motivation slightly decreases as students move to higher year levels. This is because of the increasing difficulty of the subjects and course requirements. External factors tend to have increasing

Table 3Comparison of Level Motivation of Students Along Intrinsic Factors According to Year Level

AREAS	1ST YR	2ND YR	4TH YR.	5TH YR.	6TH YR.
ALTRUISM	3.51 (VSA/VH)	3.48 (VSA/VH)	3.28 VSA/VH)	3.30 VSA/VH)	3.22 (SA/HM)
EXPLORATION	3.60 (VSA/VH)	3.55 (VSA/VH)	3.56 VSA/VH)	3.42 VSA/VH)	3.41 (VSA/VH)
MEAN	3.55 (VSA/VH)	3.51 (VSA/VH)	3.41 VSA/VH)	3.36 VSA/VH)	3.31 (VSA/VH)

LEGEND: VSA-VERY STRONGLY AGREE/VERY HIGH, SA/H-STRONGLY AGREE/HIGH

influence such as grades and desire to complete requirements particularly in the clinical aspects of the dentistry program. Table 4 shows the analysis of variance in level of motivation by year level. Since p (0.139) is greater than .05, there is no significant difference in intrinsic motivation according to year level. Therefore, the null hypothesis is accepted. So, year level does not affect the students' intrinsic motivation.

According to Coon and Mitterer (2010), intrinsic motivation enables the students to enjoy work or activity and use the activity as an opportunity to learn and participate without external reward. The student has genuine and primary interest in an activity or subject. As noted in Table 2, the mean for self-exploration is higher than the mean of altruism.

From the findings of Afsal, Ali, Khan, and Hamid (2010), they concluded that students who are intrinsically motivated perform much better academically than students

Table 4 Summary of Analysis of Variance in Level of Motivation of Students Along Intrinsic Factors According to Year Level

Source of variance	Sum of squares	Df	Mean square	F	Sig
Between Groups	1.488	4	.372	1.743	.139
Within Groups	103.492	485	.213		
Decision: accept Ho	There are no significant differences				

who are extrinsically motivated. Patall, Cooper and Robinson (2008)) had found out that, when students faced the multifaceted cerebral project, the students who were intrinsically motivated used more coherent data collecting and decision-making tactics than those students who were extrinsically motivated. The projects or the tasks which are challenging are more preferred by students who are intrinsically motivated.

Extrinsic Motivation

Table 5 presents the level of motivation of the students along intrinsic factors. Four sets of indicators describe extrinsic motivation, namely: rejection of alternative option, qualifications and career, social employment, and social pressure, rejection of alternative option.

Table 5Level of motivation of the students Along Extrinsic Factors

INDICATORS	MEAN	Std Deviation	QUALITATIVE INTERPRETATIVE
REJECTION OF ALTERNATIVE OPTION			
1. Because it is the only thing I know to do.	1.90	0.99	(MA/MM)
2. Because it is a better alternative to working.	2.16	1.01	(MA/MM)
3. To avoid being unemployed.	2.73	1.13	(SA/HM)
4. Because it gives me something to do. (or because it makes me busy?)	2.64	0.99	(SA/HM)
5. Because I do not have any better options. (or because it is my best option?)	1.99	1.03	(MA/MM)
MEAN	2.32	0.76	(MA/MM)
QUALIFICATIONS AND CAREER			
1. To gain valuable skills for my career.	3.84	0.46	(VSA/VH)
2. To enhance my job prospects.	3.77	0.50	(VSA/VH)
3. In order to have the qualifications.	3.78	0.48	(VSA/VH)
4. Because it will help set up my future career.	3.88	0.39	(VSA/VH)
5. So I can get a better job.	3.79	0.52	(VSA/VH)
MEAN	3.81	0.38	(VSA/VH)
SOCIAL ENJOYMENT			
1. Because it is a fun place to be.	2.96	0.79	(SA/HM)
2. Because I enjoy social life.	3.02	0.79	(SA/HM)
3. Because I enjoy social environment.	2.98	0.81	(SA/HM)
4. Because of the social opportunities.	3.15	0.83	(SA/HM)
5. Because it is a great place to develop friendships.	3.14	0.85	(SA/HM)
MEAN	3.05	0.68	(SA/HM)

SOCIAL PRESSURE			
1. Because others expect me to get a degree.	3.09	1.01	(SA/HM)
2. Because other people have told me I should.	2.52	1.08	(SA/HM)
3. Because it would disappoint other people if I didn't.	2.74	1.11	(SA/HM)
4. Because it seems to be the recommended thing to do.	2.75	1.04	(SA/HM)
5. Because of social expectation from those around me.	2.74	1.12	(SA/HM)
MEAN	2.77	0.91	(SA/HM)
OVERALL MEAN	2.73	0.81	SA/HM

VSA/VH-VERY STRONGLY AGREE/VERY HIGH SA/H-STRONGLY AGREE/HIGH

MA/MM-MODERATELY AGREE/MODERATELY MOTIVATE

Rejection of Alternative Option

The mean for rejection of alternative option of 2.32 indicates that the students are moderately motivated by the option that there is no other choice. This implies that the students are moderately motivated by the objective of studying and they have to get the degree completed because they wanted to be dental professionals in the future. This is corroborated by the findings of Afsal et al. (2010) in which the students who adopted rejection of alternative option tend to perform better. In the study of Haider et al. (2015) the objective is to get the degree completed as soon as possible and acquire a job. Some students do study to abstain from working because they have no other choice. As long as the fear or reward exists, the consistent performance is persistent.

Qualification and Career

The means of the indicators in the area of qualifications and career signify that the students are very highly motivated by career and qualifications. They study to gain valuable skills for a career and to be qualified to set up their future career. This implies that the students are very much career-oriented. This is confirmed in the study of Afsal, Ali, Khan, and Hamid (2010) which reported that students are concerned with their careers and more inclined towards completing the degree only to get good jobs in future. The area mean of 3.81 indicates that the students are very highly motivated by qualification and career. This means that the students are compelled to study to be qualified to obtain a good job and career. Some students are usually studying to obtain a good job after completing their studies. Such students have no actual interest in studies. To study is just compulsion for them. Learning process is not their main concern. The degree is the only dream to achieve. Good performance is anticipated from them but the struggle is only for short term as far as the reward exists (Haider, 2015, Srinivas and Venkatkrishnan, 2016).

Social Enjoyment

The means in the area of social enjoyment indicate that the students are highly motivated by social opportunities and because school is a great place to develop friendships. This implies that the students enjoy their school life and engage in fun learning.

The area mean of 3.05 shows that the students are highly motivated by the opportunity to make friends and socialize into them and have fun. In the study of Haider, et al. (2015), they consider university as a social place where making friends and having fun is common. Very low academic performance is depicted by de-motivated students.

Social Pressure

As indicated by the means in this area, the students are highly motivated to study because it is expected of them. In most cases, the impact of social pressure is seen in the pressure exerted by parents, companions, teachers, peers and other groups. In the study of Haider et al. (2015) impact of social pressures, companions, parents, and others' expectations are anticipated worthy. Actual interest towards study does not exist.

The overall ranking of the motivation factors (both intrinsic and extrinsic) is as follows: (1) qualification and career (M=3.81): (2) exploration (M=3.55); (3) altruism (M=3.45); (4) self-enjoyment (M=3.05); (5) social pressure (M=2.77); (6) rejection of alternative options (M=2.32).

Qualification and career, which topped the motivation factors (M=3.81), is an extrinsic factor of motivation. This shows that the students of dentistry are most motivated by their pursuit of dental profession, which is their career goal. This is closely aligned to the two factors which ranked second and third, respectively, among the motivating factors. In self-exploration (M=3.55, rank 2), the students pursue the dentistry course for personal

Table 6 Comparison of Level of Motivation of Students Along Extrinsic Factors According to Year Level

AREAS	1ST YEAR	2ND YEAR	4TH YEAR	5TH YEAR	6TH YEAR
Rejection of alternative options	2.35(MA/MM)	2.34(MA/MM)	2.27(MA/MM)	2.19(MA/MM)	2.50 (MA/MM)
Qualifications and career	3.82(VSA/VH)	3.83(VSA/VH)	3.68(VSA/VH)	3.81(VSA/VH)	3.87 VSA/VH)
Social enjoyment	3.14(MA/MM)	3.05 (MA/MM)	2.78(MA/MM)	3.00(MA/MM)	2.88 (MA/MM)
Social Pressure	2.85 MA/MM)	2.77(MA/MM)	2.52(MA/MM)	2.59(MA/MM)	3.18 (MA/MM)
Mean	3.04	2.99	2.81	2.89	3.11

LEGEND: VSA/VH-VERY STRONGLY AGREE/VERY HIGH, SA/H-STRONGLY AGREE/HIGH MA/MM-MODERATELY AGREE/MODERATELY MOTIVATED

growth and development. In altruism, (M=3.45, rank 3), the students pursue dentistry career to be useful members of society.

Comparison of Level of Extrinsic Factors by Year Level

Table 6 presents the comparison of the level of extrinsic motivation according to year level. All the means of the five-year levels indicate high level of extrinsic motivation. This means that their desire for rewards are high and has a less option on aspirations among themselves. In the study of Gbollie and Keamu (2017), it was found out that high extrinsic motivation for students is influenced by external factors. This indicates that their devotion to learning the different subjects is because of their desire for rewards and fear of penalty

Table 7 Analysis of Variance in Level of Motivation of Students Along Extrinsic Factors According to Year Level in Terms of Rejection of Alternative Option from teachers and parents, and not based on their inner aspirations.

Source of variance	Sum of square	Df	Mean squares	F	Sig
Between groups	1.642	4	0.410	0.701	0.592

Within groups	284.047	485	0.586		
Decision: Accept Ho	There are no significant differences				

Table 7 shows that in the area of rejection of alternative option, there is no significant differences in level of extrinsic motivation along rejections of alternative options by year level. This means that year level has no direct effect on this area of extrinsic motivation due to diversity of students on each year level.

In the study of Haider et al. (2015), students who espouse rejection of alternative options are supposed to perform less and this variable had a negative impact on students' academic performance.

Table 8 shows that there is no significant difference in extrinsic motivation along career and qualification by year level. This means that in all year levels the students study to gain valuable skills for a career. This is strongly contended by Sharma (2005), that there is a

Table 8 Analysis of Variance in Level of Motivation of Students Along Extrinsic Factors According to Year Level in Terms of Qualification and Career

Source of Variance	Sum of Square	Df	Mean square	F	sig
Between groups	0.856	4	0.214	1.455	0.215
Within groups	71.320	485	0.147		
Decision: Accept Ho	There are no significant differences				

tremendous pressure on students to earn good grades because academic performance is assumed to have predictive value toward school success as well as career success later in their career.

Table 9 shows that there is a significant difference in level of motivations along social enjoyment by year level. This implies that in each year level, there are varied activities and teaching-learning processes in which students acquire knowledge and skills. In the study of Haider et al. (2015), social enjoyment focuses on living life entertainingly and enjoying the social relationship.

Table 10 shows that there is a significant difference in level of extrinsic motivation along social pressure according to year level. This means that although with varied results, students tend to be more motivated depending on the year level to which they are being pressured in relation to the different requirements and

Table 9 Analysis of Variance in Level of Motivation of Students Along Extrinsic Factors According to Year Level in Terms of Social Enjoyment outputs they may be required of. In the study of Haider et al. (2015), he confirmed that students do their home assignments just because of their parental fear or other social pressures.

Source of variance	Sum of squares	Df	Mean square	F	Sig
Between groups	5.378	4	1.345	2.957	0.02
Within groups	220.525	485	0.455		
Decision: Reject Ho.	There is a significant difference				

Extrinsically motivated students might do a good job or perform well to achieve a certain reward, but it does not keep them motivated for long-term and overall performance does not change or is consistent (Afsal et

al.,2010). This means that students might perform very well in one specific subject to achieve a certain reward or goal and then in other subjects might show poor performance because the reward did not exist anymore.

According to Ryan and Deci (2000), students who are motivated extrinsically vacillate from high to low self-determination. Times have changed and more and more people are now running behind some part of rewards. So extrinsic factors of motivation, particularly qualification and

Table 10 Analysis of Variance in Level of Motivation of Students Along Extrinsic Factors According to Year Level in Terms of Social Pressure career can motivate student to study harder (Coon and Mitterer, 2010).

Source of variance	Sum of squares	Df	Mean square	F	Sig
Between groups	8.031	4	2.008	2.436	0.046
Within groups	399.758	485	0.824		
Decision: reject ho	There is a significant difference				

Level of Academic Performance of the Students

Specific problem number two focuses on the level of academic performance of the students. Table 11 presents the students' level of academic performance. The students performed as follows: excellent, 00.00; very good, 7.14

percent; good, 41.43 percent; fair, 42.65 percent; and poor, 8.78 percent. The mean academic GPA is 80.134, interpreted as good. The University of Baguio grading system shows that 80-85 GPA is equivalent to good/average. interpreted as good. The University of Baguio grading system shows that 80-85 GPA is equivalent to good/average. This finding implies that the students had good/average level of academic performance.

The study of Shazadi and Ahmed (2011) reported that the mean level of academic performance of university

Table 11Level of Academic Performance of the Dentistry Students

Grade Point average	Number of Students	Percentage Distribution	Level
91-99	00	0.00%	Excellent
86-90	35	7.14%	Very Good
80-85	203	41.43%	Good
75-79	209	42.65%	Fair
74 & below	43	8.78%	Poor
Total	490	100.00%	
Mean	80.134		Good

students in Gujrat, Pakistan was average. The researchers recommended that students should exert more efforts in academic activities such as examination, quizzes, assignments and update themselves with academic matters (such as syllabi and course outline modules), so that they can enhance their academic performance.

The result of the study of Shazadi and Ahmed (2011) also show that academic interaction with teachers and peers have significant effect on their academic performance.

Level of Academic Performance According to Year Level

Specific problem 2.1 deals with the comparison of the level of academic performance according to your level.

Two year levels registered good levels of academic performance. These are first year and fourth year levels. Second year, fifth year and sixth year had fair level of academic performance (see Table 12). This is because there is a diversity of students taking up dentistry and there are varied interests in the factors predicting academic

Table 12 Level of Academic Performance According to Year Level

Year Level	Mean	Academic Level
First year	82.4843	Good
Second Year	78.6984	Fair
Fourth year	81.9744	Good
Fifth Year	76.2510	Fair
Sixth Year	78.2202	Fair
Mean	80.1340	Good

performance of the students. In the study of Sharma (2005), he contends that there is a tremendous pressure on students to earn good grades because academic performance is assumed to have predicted value toward school success as well as career success later.

Table 13 shows the analysis of variance in level of academic performance according to year level since the p of .000 is less than .05. Therefore, the null hypothesis is rejected. This indicates that there is a significant difference in the level of academic performance according to year level. This implies that not all students are performing as expected per year level.

In upper year levels, subjects tend to increase in difficulty. Some of the concepts are difficult to learn and understand and requirements of the course tend to be more demanding, particularly in the dentistry program. When problems and difficulties are experienced by the students, then they need to obtain assistance from others.

Table 13 Summary of Analysis of Variance in Level of Academic Performance According to Year Level

Source of Variance	source of square	Df	Mean Square	F	Sig
Between groups	236.618	4	592.905	16.332	0.000
Within Groups	17565.901	485	36.018		
Decision: Reject Ho	There are significant differences.				

That is where mentoring comes in. When students find certain areas difficult to learn, the teachers should give the needed help to the students (Srinivas & Venkatkrishnan, 2016). Motivation literature shows that students respond positively and actively to instructors who manifest humaneness and caring (Alderman, 2004).

Correlation Between Level of Motivation and Level of Academic Performance

Specific problem number three focuses on the correlation between level of motivation and level of academic performance. Table 14 shows the level of correlation between motivation and academic performance.

There is a slight level of correlation between the following: GPA and rejection of alternate option; GPA and social pressure; GPA and altruism; GPA and self-exploration; and GPA with qualification and career. There is no correlation between GPA with social enjoyment. The mean r is 0.02, interpreted as slight correlation. This implies that the relationship between academic performance and motivation, in general, is slight. Higher r's are noted along the intrinsic factors of altruism and self-exploration. A closer look at table 14 shows that the highest r (0.047) is found in the correlation of GPA with self-exploration, which is an intrinsic factor, followed by GPA and altruism (0.027) which is also an intrinsic factor.

From the given results, the researcher infers that academic performance is more likely influenced by intrinsic motivation than by extrinsic motivation. The overall mean for intrinsic factors is 3.50 (Very high); the overall mean for extrinsic factors is 2.77 (High). Evidently, there is a higher level of motivation along intrinsic factors. The students' good/average level of academic performance would have been more influenced by intrinsic factors than by extrinsic factors.

Table 14 Correlation Between Motivation and Academic Performance.

GPA with Motivation Factors	Pearson r	Indication
GPA with altruism	-0.027	Low
GPA with Self-exploration	0.047	Slight
GPA with Rejection of alternate option	0.006	Low
GPA with qualification and career	-0.020	Slight
GPA with Social Enjoyment	0.000	No relationship
GPA with Social Pressure	0.011	Low
Mean r	0.020	Slight

This finding confirms the finding of Wigfield and Eccles (2002); Wigfield and Wagner (2005); Deci and Ryan (2008), that intrinsically motivated students are more competent and engaged in their learning than students who are not intrinsically motivated.

This is affirmed further by Haider et al. (2015), where they found out that intrinsic motivation has greater impact on academic performance than extrinsic motivation.

The mean correlation coefficient is 0.02 which is interpreted as slight. This means that there exists a slight relationship between academic performance and motivation.

The findings of this present study negate the findings of Ryan and Deci (2009), Afsal, Ali, Khan, and Hamid (2010), whose findings revealed that motivation improved the academic performance of the students.

Their performance does not remain constant as a result and it showed that students' who are motivated perform well academically for their own interest and for their own learning. These students showed they are somewhat interested in learning and in achieving high goals.

The findings of this study tend to negate the findings of Ryan and Deci (2009), Afsal, Ali, Khan, and Hamid (2010), and Naida, Quereshi, Pirzada, and Shahzadi (2015), whose findings revealed that motivation improved academic performance of the students.

Based from these results, it was found out that the relationship between the dentistry students' motivation and their academic performance is slight and weak. Motivation is not the only factor that affects academic performance. Several factors such as diversity of teaching method among teachers, degree of difficulty of subjects for each year level, number of units work load per year level, learning styles and study habits are also correlates of academic performance.

Despite their high level of motivation, dentistry students are also confronted with challenges that affect their academic performance. Learning hindrances include faulty learning strategies which result to low level of self-regulated learning. As pointed out by Al Khatib (2010), students are at the core of the learning process. As such, their ability to manage their own learning toward a higher level of self-regulated learning can enhance their academic achievement.

CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the conclusions and recommendations derived from the findings of the study.

Conclusions

The very high level of motivation of the Dentistry students reflects a purposeful motive- driven school environment in the School of Dentistry.

The good level of academic performance indicates that the dentistry students are in the right direction towards the completion of their degree program, however, the level of good is not enough, and must be raised to a higher level.

The slight level of coefficient of correlation between motivation and academic performance indicates that there exists a weak relationship between motivation and academic performance. As such, a high level of motivation does not necessarily produce a high level of academic performance. Academic performance is more likely influenced by intrinsic motivation factors than by extrinsic motivation factors.

RECOMMENDATIONS

Based on the conclusions arrived at, the following recommendations are offered:

1. The condition of having strongly motivated students in the School of Dentistry should be maintained and further enhanced through varied, purposeful student-centered activities.

2. The good level of academic performance should be further improved to very good and higher through enhanced students centered teaching – learning strategies, active learning interventions and mentoring.

3. The weak relationship between motivation and academic performance should be further enhanced to attain a stronger relationship. Teaching-learning activities should capitalize on strong motivation factors.

4. A follow up research could be done by the researcher for an attempt to further investigate the weak relationship of motivation and academic performance of dentistry students in the University of Baguio.

5. Further researches can be conducted to focus on other correlates of academic performance such as study habits, involvement is co-curricular activity, mentoring program and other student-centered interventions.

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