

# Mastery-Approach Goals as a Predictor of Learning Readiness among First Year Undergraduate Students in Selected Public Universities in Western Kenya

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**Abstract** There has been relatively low level of learning readiness among first year undergraduate students at universities in Kenya. The present study sought to investigate how mastery-approach goals predicts learning readiness among first year undergraduate students in selected public universities in Western Kenya. The study was guided by the Goal Orientation Theory and Maslow's Theory of Motivation. The study employed the embedded mixed methods design. The target population was 12,000 first year students, 122 lecturers, 6 deans of students, and 6 university counsellors from six public universities in western Kenya. The sample size consisted of 372 first year university students, 22 lecturers, 3 deans of students, and 3 university student counsellors in 3 public universities. Questionnaires, interviews, and document analyses were employed to elicit data from the respondents. Achievement goal questionnaire-revised and an academic readiness questionnaire were used to collect quantitative data while qualitative data was obtained from interview schedules. Construct validity of the instruments was ensured through expert judgement while reliability of the instruments was established by cronbach's alpha method which reported an alpha of 0.809. Quantitative data was analyzed by descriptive and inferential statistical techniques such as Pearson's product moment correlation coefficient, linear regression analysis and multiple regression analyses. Thematic analyses were used to analyze qualitative data. There was a statistically significant strong positive correlation ( $r=.733$ ) between mastery approach goals and learning readiness. It was also revealed that mastery-approach goals accounted for 53.8% of the variation in learning readiness. It can therefore be concluded that mastery approach is a significant predictor of learning readiness among first year university students. The study recommends that university administrators should facilitate academic engagement for first year students to enable them have a desire for learning.

**Keywords** Mastery-approach goals, Learning readiness, University students, Kenya

## 1. Introduction

First year is a crucial period in a university student's academic journey, this is because the student is undergoing a transition which if not handled well makes some to drop out due to discouragements which can be social or academic. First year students experience challenges that include autonomy, social adjustment, peer compatibility, and academic pressure (Kimani, & Mutweleli, 2012). Those that are not able to manage the transition and adapt to the new college environment often experience adjustment

problems (Herrero, 2014). Learning has been observed as a cognitive process that is dependent on meta-cognitive behaviors such as attending, focusing, questioning, comparing, and contrasting, that are personally controlled or managed by the learner (Long, 2011). According to Knowles (2008) self-directed learning is a process in which individuals take the initiative in designing learning experiences, diagnosing needs, locating resources, and evaluating learning. Similarly, a definition for the readiness for learning is provided by Guglielmino (2009) stating that it consists of a complex of attitudes, values, and abilities.

A student who drops out of the university is one who leaves the university prematurely before finishing the course enrolled for or graduating. This excludes students who transfer to other institutions or students who change their degree programs. Dropping out of university during the first academic year or before the start of the second academic year is frequently directly or indirectly related to

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poor academic performance (Scott, Yeld, and Hendry, 2007). Majority of students drop out of university during or after their first year of study (University World News, 2008). The annual survey of the American College Testing organization (ACT) among 500 institutions in the USA, indicated a dropout rate ranging from 31.8% to 47.2% among undergraduate students (ACT, 2003). Similarly, the graduation rates in the USA for the last twenty years have remained relatively stable, ranging from a high of 54.6% to a low of 50.9% (ACT, 2003). In the United Kingdom, 25% of students at university did not complete their degree program in 2002 (University World News, 2008). As a further example of international trends, in Australia, according to Health Gilmore Higher Education (HGHE) (2009), 20% of first year students drop out of university before the end of the first academic year.

In South Africa, data shows that 50% of undergraduate students enrolled in higher education institutions in South Africa drop out, with about 30% dropping out in their first year (Department of Education, 2005). A more recent study by the Human Science Research Council (HSRC) found that 40% of students drop out of university in their first year (University World News, 2007). The dropout of students from university, as well as students taking longer to complete their studies, has certain consequences for the student, university and the state. A university education provides students with a higher overall income, an improvement in living standards, and a degree of recognition for their achievements compared to students with only a high school education. In turn, a student graduating from university will provide the state with higher tax revenues and a return of the investments placed in the students through government loans, bursaries and funds. Low graduation of students, as well as high dropout of students not only negatively affects the university budget but also lowers public conviction about the quality and standard of education offered at university (Braxton, Hirschy, and McClendon, 2004). For students to be competitive in the global market place, they have to be well educated, trained and skilled. Consequently, for a country to be successful and develop economically and socially, highly qualified and educated students are a prerequisite. University graduates are essential in order to address the high level skills shortage in the country (Scott et al., 2007), affecting economic development and growth.

A mastery goal is when an individual set out to become the best at a single task. Behavioral researchers have found that mastery goals are more effective because one's satisfaction is not related to external indicators. Therefore the person is less apt to give up in difficult circumstances, and can persevere through setbacks. Mastery goals are always just beyond reach. This makes motivation over the long term easier to maintain. They are like a line that is asymptote. The curve of the line gets closer to the goal, but you never quite reach it; there is always something to strive for. People who reach the pinnacle of their skills rarely set performance goals. Mastery goal learners are more interested in competing with

themselves, than gaining external feedback and validation. This orientation allows them to compete at a higher level over a longer period of time. With mastery goals there is always something to strive for. Even if it is as simple as being better at something tomorrow, than you were today (Nebo, 2010).

Literature on mastery goal and other learning outcomes have been documented. A laboratory experiment was conducted in USA by Belenky and Nokes-Malach (2013). The results showed that students' existing mastery-approach orientations for mathematics strongly predicted knowledge transfer for all of the instructional conditions except for students given invention activities with a performance framing. In U.S.A, Hogan (2016) did a study on understanding the relationships among students' goal orientations, self-efficacy, anxiety, and accelerated academic success in the redesign of developmental mathematics. Based on Spearman's rho correlations, there were statistically significant relationships between self-efficacy and success as well as between intrinsic goal orientation and success. In Newyork, Senko, Corwin, Frund, Alexandra (2015) showed that young adults perceived the mastery-approach goal to be more attainable and therefore felt less pressure, enjoyed the task more, and performed better with it, where as older adults showed this pattern with the mastery-avoidance goal. In Malaysia, Asif (2011) explored the relationship between achievement goals as predictor variable and intrinsic motivation for academic learning as an outcome variable was investigated using a sample of International Islamic University Malaysia (IIUM) students. Mastery goal was found to be a positive predictor of intrinsic motivation for academic learning. In Greece, Apostolou (2015) revealed that mastery-approach goals were negative predictors of cheating behavior. The findings underline the role played by mastery approach goals in deterring cheating behavior in academic settings. In Australia, Balapumi (2015) revealed that peer influence, family influence, mastery goal orientation, employment prospects, self-efficacy, metacognitive knowledge awareness and prior learning experience, have significant influence on university students' self regulation of learning. In Belgium, Matos and Aurora-Miraflores (2014) did a cross-sectional study on achievement goals among Peruvian high school students where achievement goal framework was used to study the role of motivation in the academic context of a Peruvian sample of 8<sup>th</sup> to 10<sup>th</sup> grade high school students (N = 1505). Mixed results were found for pursuing performance approach goals, which predicted a greater use of learning strategies, but were unrelated to academic achievement. In Spain, Fernandez-Rio, Cecchini, Mendez-Gimenez, Terradus, and Garcia (2018) did a case study on understanding Olympic-champions and their achievement goal orientation, dominance, pursuit, and motivational regulations. Results indicated that participant three had performance-approach goal orientation, stronger mastery-approach goal dominance, lower performance approach and performance-avoidance goal pursuit higher

mastery-avoidance goal pursuit and lower controlled motivation than the other two participants.

Students' achievement goals are those specifically related to how they approach learning opportunities, emphasizing either the development of new knowledge or skills or the demonstration of knowledge or skills in comparison to others (Elliot, 2007). Orientation indicates that individuals tend to set similar achievement goals across a given domain, such as academics or athletics (Elliot, 2007; Pintrich, Conley, and Kempler, 2003). Types of achievement goals students set has been linked to differences in emotional affective behaviour and academic outcomes (Verner-Filion and Gaudreau, 2010). The precise mechanism by which different achievement goal orientations result in different outcomes has not been determined, but the goal orientation literature has been connected to research concerning other academic constructs, such as perfectionism (Fletcher, Serena, and Wang, 2012). University programs may offer opportunities to fulfill multiple types of achievement goals, but it is also possible that students with different achievement goal orientations may choose to enter honors programs at different rates.

In Ethiopia, a study reported that the rate of enrollment in physics undergraduate programs are those whose mean scores in Ethiopian National Higher Education Entrance Examination is lowest. Explanations given for the low enrollment rate are inadequate pre-university preparation which results to lack of learning readiness, and also weak mathematics background (Semela, 2010). In Egypt, an examination of self-directed learning readiness among nursing students was done at four nursing institutions. The students showed adequate level of learning readiness which has encouraging implications on their career and in-service education; it further helps in development of student centered nursing curriculum. Findings also show a positive attitude of students towards self-directed learning as majority of the students have high scores. The study concludes that students in different nursing institutions show satisfactory level of readiness (Said, Khan, Ghani, and Kiraman, 2015).

In Kenya, some studies have shown that majority of the students do not have access to support services like deans of students' mentoring programs, wellness etc. The students have low adjustment to academic programs (Wangeri, Kimani, & Mutweleli, 2012). A low readiness level was reported which suggested that internal environment may hinder efforts to adopt e-learning as a mode of delivery (Okinda, 2014). Possibly, due to the realization of the importance of adjustment among first year university students which facilitates their learning readiness has prompted universities to organize the orientation programmes for fresh students.

All universities take fresh students through an elaborate orientation programme meant, among other things, to assist students adjust to the new social and academic environments in the university context. It is meant to make them ready to learn. In this context inappropriate learning

readiness among first year students in universities due to adjustment challenges-since first year is a transition period-may result to loss of many rewarding opportunities both for the individual learner and for the society. Thus, there is need to study factors that are associated with learning readiness. Its against this background that the researcher investigated how mastery goal orientation predicts learning readiness.

## 2. Research Methodology

The study employed a mixed methods approach, this involved the collection, analysis and integration of both quantitative and qualitative research methods within a single research study in order to answer research questions. Specifically, the embedded mixed method design was employed whose purpose was to collect both quantitative and qualitative data simultaneously, but to have one form of data play a supportive role to the other form. In this study, qualitative data was collected to corroborate quantitative data (Creswell, 2014). The target population was 12,000 first year university students from six public universities in the lake region of Kenya, 122 lecturers, 6 deans of students, 6 university counsellors. Western Kenya has a total of six public universities. Out of these, three were sampled for the study. The sample size consisted of 372 first year students, 20 lecturers, 3 deans of students and 3 university counsellors. In addition to student questionnaires, 23 interviews were conducted, transcribed and analyzed. The study employed questionnaires, and interview schedules to gather information addressing research objectives. The Goal Questionnaire for Students (GQS, [Elliot and Murayama, 2008]) was modified to measure mastery-approach goals while the Learning Readiness Questionnaire (LRQ) was modified to measure learning readiness of first year university students. The study also employed Interview Schedules.

Validity of research instruments in the present study was through, face, construct and content validities of the questionnaires, interview schedules and document analysis was determined by presenting and discussing the various items in research instruments with two experts in the school of Education of Jaramogi Oginga Odinga University of Science and Technology (JOUST) who were actually the PhD thesis supervisors. The supervisors were able to provide their views on the relevance, clarity and applicability of the questionnaire scales, interview schedule guides and document analysis guide. Their suggestions, together with the findings from the pilot study were used to modify the items in the research instruments. This ensured that the test items were clear, relevant and well organized. Triangulation approach was further adopted to ensure the validity of the research instruments where data from multiple techniques validate each other (Mugenda and Mugenda, 2012). The study used multiple methods of data collection through interviews, and questionnaires. This enabled areas that may might have been overlooked by one method to be

strengthened and checked by the other method of data collection.

Reliability of the instruments was tested during the piloting stage. Piloting was conducted in 1 university in Western Kenya region of which 10 Students, 8 Lecturers, 1 Dean of students, and 1 University Counsellor were selected randomly for piloting. The researcher used internal consistency method to determine the reliability of the instruments. This was done using Cronbach's alpha. According to (Oso and Onen, 2014), a questionnaire has good internal consistency if the Cronbach alpha coefficient of a scale is above 0.7. In this study internal consistency reliability of the instruments was obtained by computing Cronbach's alpha ( $\alpha$ ) using SPSS.

### 3. Findings and Discussion

The research findings were presented on the basis of the study objectives and hypotheses. The quantitative data were analyzed using both descriptive and inferential statistics. The descriptive statistics was used to describe and summarize the data in form of tables, frequencies, percentages, means and standard deviations. The inferential statistics was used to help make inferences and draw conclusions. Statistical tests, Pearson product-moment of correlation and regression analysis were used to investigate the relationship between the variables. All tests of significance were computed at  $\alpha = 0.05$ . The Statistical Package for Social Sciences (SPSS) version 22 was used to analyze the data. For the qualitative data a thematic analysis approach was used.

#### Hypothesis Testing:

To investigate whether there was any statistical significant relationship between mastery-approach goals and learning readiness among first year undergraduate university students, the null hypothesis was tested as follows:

**H<sub>01</sub>:** *There is no statistically significant relationship between mastery-approach goals and learning readiness among first year undergraduate university students.*

To do this, a Pearson Product Moment Correlation Coefficient was calculated and table 1 below shows the correlation analysis results in SPSS output.

**Table 1.** Relationship between Mastery- approach and Readiness to Education

		Mastery- Approach	Overall Learning Readiness
Mastery- Approach	Pearson Correlation	1	.733**
	Sig. (2-tailed)		.000
	N	324	324
Overall Learning Readiness	Pearson Correlation	.733**	1
	Sig. (2-tailed)	.000	
	N	324	324

\*\* . Correlation is significant at the 0.05 level (2-tailed).

The finding of the study shows that there was statistically significant positive correlation ( $r=.733$ ,  $n=324$ ,  $p<.05$ ) between mastery-approach goal orientation and learning readiness, with high mastery-approach goal orientation resulting into more learning readiness among the first year university students and vice-versa. Given that the relationship was statistically significant, the hypothesis that, "*there is no statistically significant relationship between mastery-approach goals and learning readiness among first year undergraduate university students*" was rejected. This finding is in disagreement with Phan (2014) whose findings indicated that mastery-approach was not a significant correlate of academic outcomes.

The study further sought to establish the relationship between mastery-approach goals and individual aspects of learning readiness in four aspects; self-management study strategies, desire for learning, self-control and perseverance, as indicated in Table 2.

It evident from Table 2 that all the four aspects of learning readiness were statistically significantly ( $p < .05$ ) positively related to mastery-approach goal orientation among the first year university undergraduate students. It conforms to Apostolou, (2015) which revealed the role played by mastery approach goals in deterring cheating behavior in academic settings. However, a study Basit and Rahma (2015) study in Pakistan was not in agreement with the current findings since the study found out that teachers' perception of school goal structure was not significantly correlated with students' achievement goal orientation. Teachers had low mastery approaches to instruction.

**Table 2.** Correlation between mastery-approach and individual aspects of learning readiness

		Self-management study strategies	Desire for Learning	Self-Control	Perseverance
Mastery-Approach	Pearson Correlation	.727**	.662**	.624**	.360**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	324	324	324	324

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**H<sub>02</sub>:** *There is no statistically significant extent to which mastery-approach goals influence learning readiness among first year undergraduate university students.*

To estimate the level of influence of mastery-approach goals on overall learning readiness, a coefficient of determination was worked out using a regression analysis

whose results were as shown in table 3.

**Table 3.** Model Summary on Regression Analysis of Influence of Mastery-Approach Goal Orientation on Learning Readiness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.733 <sup>a</sup>	.538	.536	.43420

a. Predictors: (Constant), Mastery-Approach

The model reveals that mastery-approach goal orientation accounted for 53.8% as signified by coefficient  $R^2=.538$  of the variation in learning readiness among the first year university students. Findings concur with Belenky and Nokes-Malach (2013) whose results showed that students' existing mastery-approach orientations for mathematics strongly predicted knowledge transfer for all of the instructional conditions except for students given invention activities with a performance framing.

Further from qualitative data revealed in a number of ways the extent to which mastery approach goals had an influence on learning readiness among first year university students through the expressions of students, lecturers, university counsellors and deans. The students gave the following remarks during the interview:

*I actually thought that high school prepared me pretty well for university. It was a high achieving school, so we were all set to join university.* (Student, 09).

*Academically it was okay. My school had a thorough program where we could do exams weekly, revise with our teachers before we sit for another exam, so that prepared me well for university.* (Student, 21)

*Some secondary schools does a good job, they give us very organised students, aware of what happens in the university, others behave like primary school pupils, secondary school teachers need to prepare learners seriously for university.* (Lecturer, 06)

From the excerpts above, students who experienced a more rigorous high school program reported less stressful academic transitions to university could adjust readily. This points to the significant role that pre-university programmes could play in preparing individuals for entry into university. This is due to the nature of the way universities generally operate-especially the freedom that students have in the management of their education and their lives. This findings are in line with Cossy (2014) whose study findings found out that students enter university with inadequate skills, and with inaccurate knowledge and expectations about university life. As a result of their inadequate preparation students face numerous challenges, the most difficult challenges tend to be time management, making friends, and managing the increased workload.

The study in addition established from the qualitative findings, that a student's natural interest which is an element of mastery goals influences the way they plan their learning as suggested by the following response;

*I want to further my knowledge ... and I think I have a bit of thirst for knowledge...I hear something and I want to learn a bit more about it if I don't understand something I learn more about it, so that if someone asks me in the future I can, if I can remember it, then I can pass the knowledge on.* (Student 01)

Similarly another student also said

*I am actually lucky because I enjoy what I am doing and at the same time I realise I needed to do well so I was able to put the effort in and achieve my targets.* (student 12)

*For learners to excel in their academic work, they need to have a reason why they are pursuing it, not just because their siblings or relatives are in the same field, with that it is easier for them to go through the four years with several challenges on their way.* (Lecturer, 10)

The responses indicate that first year university students cannot be wholly said to be a group of persons without interest in studies; perhaps, those who fail, fail because of such factors as fatigue, panic, sickness, etc and not really lack of reading or poor attitudes to learning. First year students might find the overall learning experience overwhelming, being fairly new to the university learning environment but with those intrinsically motivated, they never give up easily. This agrees with a study by Deasy, Coughman, Pironom, Jourdan, Mannix-McNamara (2014) which found out that a significant percentage of respondents was psychologically distressed. The factors which contributed to their distress, included study, financial, living and social pressures.

## 4. Conclusions and Recommendations

Based on the current study findings, it can be concluded that, the university has a big role in facilitating successful transition of first year university students. The Deans of students, Lecturers, University counsellors all need to guide the first years accordingly so that they are don't fall victims of threats which makes it hard for them to adjust to university life hence low learning readiness. Mastery-approach goal is an important aspect of goal orientation that is important for first year university students since they have reasons for engaging in academic tasks hence boosting their learning readiness, nobody pushes them for example to attend lectures, go to the library to read, attend laboratory sessions for the practical subjects; they are intrinsically motivated.

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