

**ACHIEVEMENT GOAL ORIENTATION, SELF-EFFICACY, AND
ACADEMIC ENGAGEMENT AMONG ADOLESCENT
STUDENTS IN KABALE DISTRICT, UGANDA**

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DECLARATION

This dissertation is my original work and has never been presented for a degree in any other University.

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APPROVAL

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DEDICATION

This PhD Dissertation is dedicated to Compassion International founders, my beloved husband Rev. Dr. Justus. B. Murokore and my children Jesse Musinguzi, Esther Kukunda and Joshua Mbabazize, my siblings Gillian Nyinomujuni, Zebia, Miria and Adella, Annet, Angella, Irad, Jacob my spiritual son Athur Mugumya, uncle John Twinomusinguzi and my mother Enid Turyatamba for their unwavering support, unconditional, inspirational drive towards this accomplishment. May God bless you mightily!

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OPERATIONAL DEFINITION OF TERMS

Academic engagement: Adolescent academic engagement refers to students' effort, commitment and active participation in academic related activities directed towards achievement of their academic goals (Fredricks et al., 2004; Reeve, 2013).

Achievement goal orientation: According to this study, achievement goal orientation refers to motives behind adolescent students' motivation to approach engagement in academic tasks (Harackiewicz & Elliot, 1993).

Self- efficacy: According to this study, self-efficacy construct refers to an individual's belief in themselves as possessing the capacity to successfully engage in academic tasks (Bandura et al., 1996).

Adolescent students: According to this study, an adolescent is defined according to Nienstein et al. (2009) chronologic definition which states that an adolescence refers to a developmental period between childhood and adulthood with sub stages ranging from 12 to 24 years depending on gender (Curtis, 2015). For this study an adolescent meant a secondary school student within the age range of 12 to 21 years.

LIST OF ABBREVIATIONS AND ACRONYMS

AE	Academic Engagement
AGO	Achievement Goal Orientation
AGOQ	Achievement Goal Orientation Questionnaire
MAP	Mastery-approach
MAV	Mastery Avoidance
NGOs	Non-Governmental Organisations
PAP	Performance-approach
PAV	Performance-avoidance
SCT	Social Cognitive Theory
SDT	Self Determination Theory
SE	Self-Efficacy
AE	Academic Engagement
BE	Behavioral Engagement
EE	Emotional Engagement
AE	Academic Engagement
AGENG	Agentic Engagement

ABSTRACT

Globally, education is a key pathway for overcoming poverty. Financial support from governments and non-governmental organizations facilitates students' access, engagement, and success in academics. Despite the existing multifaceted support interventions in Uganda, about 83% of Ugandan children enrol in primary school, only 22% progress to secondary school, and less than 5% attend post-secondary education programs. To address this low academic access and success characterised by low school retention rates, this study examined the influence of achievement goal orientation, self-efficacy, and other context-based factors on the academic engagement of adolescent students in Kabale District, Uganda. Using a convergent parallel mixed-methods approach, the study collected quantitative data from 510 adolescent students and conducted in-depth interviews among 14 key informants who included officers of Compassion International; teachers, directors of studies, and a subset of adolescent students. Quantitative data was then entered into the Statistical Package for Social Scientists (SPSS) version 20 with a Process Macro plugin by Hayes version 4.2 for analysis. Findings of the study indicate that there were statistically significant demographic variations in achievement goal orientation, self-efficacy, and academic engagement. Regression analysis results reveal that self-efficacy mediated the relationship between achievement goal orientation and academic engagement. Qualitative findings indicate that apart from achievement goal orientation and self-efficacy, external support, future career and employability aspirations influenced academic engagement. Findings of this study contribute to a deeper understanding of the complex interplay of the study variables, providing valuable insights. The study recommends that policy makers and all education stakeholders create awareness of the importance of achievement goal orientation and embrace self-efficacy enhancement strategies while designing effective educational interventions to improve academic engagement in low income contexts.

CHAPTER ONE

BACKGROUND

1.0 Introduction

This chapter presents the background of the study, statement of the problem, study objectives, research questions and hypotheses, scope, significance of the study and conceptual framework.

A nation is as strong as her education products. Secondary education, in particular, is a critical educational stage as it prepares students for potential pathways into tertiary education or other post-secondary programs through equipping them with the competencies needed to successfully transition into the labor market and contribute productively to the knowledge economy (World Bank, 2018). Although nations (through governments and non-governmental organisations) and all primary caregivers of developing individuals work hard to facilitate students' education access trusting that teachers and instructors will primarily assist in achieving their education goals, the role of students cannot be overlooked.

A variety of factors influence students' engagement in academics including age, gender, external support, achievement goal orientation and self-efficacy among others (Fredricks et al., 2019; Duchesne et al., 2019; Abubakr, 2018). Dweck et al. (2014) recommend focusing on the students' psychology and non-cognitive factors to understand learning. Academic engagement is one of the essential aspects necessary for students' education success. Compassion International – a prominent non-profit organization – facilitates students' engagement through provision of educational sponsorship and holistic support to children living in poverty.

1.1.0 Background

This section presents the historical, theoretical, conceptual and contextual perspectives of the study variables.

1.1.1 Historical Perspective

Academic engagement is not only critical for ensuring academic success but it is also used as an interventional approach to minimise adolescent problem behaviors and school dropout (Chiu, 2021; ONG, 2018). The concept of academic engagement has gained considerable research attention in the last two decades, in particular as an antecedent for students' successful academic adjustment predicted by achievement goal orientation dimensions (Newton & Cundy, 1983; Martín et al., 2021). Although in the 1990s perspectives on engagement were initially limited to work-related engagement (Kahn, 1990), its conceptualisation became increasingly popular and broader in the 20th Century (Schaufeli, 2013). It was reported that by 2013, over 1,600 articles were already published about work-related engagement (Schaufeli, 2013). As interest in work-related engagement gained global momentum, scholars extended the concept to academic work done by students and named it 'academic engagement' (Appleton et al., 2008; Schaufeli, 2013).

Broadly speaking, Christenson et al. (2012) define the term academic engagement as a student's active participation in academic activities and commitment to achieving learning goals (Sökmen, 2021). Students' school related activities were considered as "work," because they lead to measurable goals, that is, directed outcomes typically influenced by both self-determined behavior and/or external factors (Deci et al., 1991). For decades, research on academic engagement in developed countries has shown that students who are

highly academically engaged are likely to be motivated and rarely drop out of school (Salma-aro, 2021). A case in point is a study conducted among Turkish high school students which revealed that academic engagement mediated the relationship between academic responsibility and academic procrastination (Çapri et al., 2017). A longitudinal study done among primary school children from the urban poor communities in the USA found that adolescent engagement in school was predicted by both self-determined behaviors and external factors like rewards (Fredricks et al., 2019).

However, thus far, most studies on academic engagement have been done in developed, largely Western Educated Industrialised Rich and Democratic (WEIRD) countries (Henrich et al., 2010). Unfortunately, conclusions drawn primarily from research findings within such education contexts are highly biased and problematic, given that WEIRD nations only represent a tiny subset of global populations, and do not accurately reflect historical or cultural diversity (Nielsen et al., 2017).

Within the African continent, there is scanty literature on students' academic engagement. One study (Wara et al., 2018) was conducted in Kenya on cognitive engagement among teacher education students. In the Ugandan context, two published studies have been conducted on university students' research engagement and academic engagement respectively (Atibuni et al., 2017; Mugizi et al., 2020). However, there is a dearth of information regarding academic engagement dynamics among secondary school adolescents in Uganda.

1.1.2 Theoretical Perspective

This study was primarily hinged on Self-Determination Theory (SDT) postulated by Ryan and Deci (1991), and was complemented by Social Cognitive Theory (SCT) advanced by Bandura (1991, see Camp & Surum, 2018). The SDT and SCT address key aspects required for desirable academic engagement among developing individuals (these theories are discussed in detail later in chapter two, section 2.2.1). Secondary school adolescents are particularly in a critical developmental stage, characterised by the onset of goal setting skills, critical decision making about future choices, and peer trust building. Therefore, a core tenet of the current dissertation is that once a secondary school adolescent personally feels competent, connected to the learning environment, and has the autonomy to make learning decisions, they would experience effective academic engagement.

Despite the self-determined behavior advanced by SDT, effective engagement is also influenced by external motivations and self-efficacy beliefs mainly predisposed by external factors as advanced by SCT. Accordingly, an examination of how achievement goal orientation and self-efficacy influence academic engagement among secondary school adolescents can be sufficiently explained by SDT and SCT. The SDT is relevant to this study because it explains an individual's self-determined behaviours depicted in achievement goal orientation dimensions which consequently influence a person's academic engagement levels (Guay, 2022).

However, SDT mainly focuses on the impacts of self-determined factors like self-efficacy on students' engagement in their academic work. Since self-efficacy is influenced by a number of external factors like feedback from teachers and peers its effect on students' academic engagement can further be explained by the Social Cognitive Theory. Social Cognitive Theory emphasises that human functioning is a result of the interaction between personal factors (P), environment (E) and behavior (B). Personal factors include an individual's beliefs in their ability to successfully accomplish academic tasks (self-efficacy) which are based on experiences within the learning environment (Fredricks et al., 2019). Both SCT and SDT are significant to this study because they concur with the fact that successful academic engagement requires reciprocity of internal and external factors. These theoretical constructs are further explained in chapter two (see Section 2.1).

1.1.3 Conceptual Perspective

As reflected in the theoretical perspective, this study had three main variables: (1) achievement goal orientation (as an independent variable), (2) student academic engagement (as a dependent variable), and (3) self-efficacy (as a mediation variable). By investigating the mediating role of self-efficacy in the relationship between achievement goal orientation and academic engagement, this study not only unravels the complex interplay of motivational factors, but also pinpoints specific targets for enhancing student engagement and success, especially in resource-constrained settings like Kabale district, Southwestern Uganda. This knowledge provides a background for educators and policymakers to tailor interventions that cultivate self-belief, drive goal-setting, and ultimately foster a thriving learning environment for all students.

Achievement goal orientation (AGO) is conceptualised as an individual's set of beliefs that reflect the reasons why they approach and engage in academic tasks (Lin, 2021). Research advocates for AGO conceptualised in a 2x2 model to predict students' learning approaches depicted in four dimensions which include Mastery Approach, Mastery Avoidance, Performance Approach, and Performance Avoidance goals (Üztemur, 2020).

Mastery approach orientation is where individuals are motivated by the desire to learn, understand, develop competence and acquire knowledge for self-skill enhancement (Harackiewicz & Elliot, 1993). Students who are inclined to mastery approach goal orientation strive for personal growth, improvement, and mastery of the task or subject matter. Performance approach orientation is where individuals are primarily motivated by the desire to demonstrate their competence through outperforming others. They focus on achieving positive evaluations, recognition, and social comparison with others. Their goal is to demonstrate their ability and receive favourable judgments from others (Elliot & McGregor, 2001).

Mastery avoidance orientation refers to individuals who are motivated to avoid demonstrating a lack of competence or inability. They are concerned about failure and tend to focus on avoiding mistakes, criticism, or negative evaluations. Their primary goal is to prevent the perception of incompetence or failure so they will choose what they deem as simpler academic tasks in which they can demonstrate competence. Performance avoidance orientation refers to individuals who are primarily motivated to avoid negative evaluations, criticism, or failure escalating from their inability to outperform their peers (Elliot & Harackiewicz, 2015). They are concerned about how others might

negatively judge their performance, and their goal is to avoid appearing as academic failures compared to their peers. Therefore, understanding achievement goal orientation dimensions and how they influence students' confidence in learning is very critical hence very important as an independent variable in this study

In relation to self-determination theory, this study adopted the 2x2 model to examine achievement goal orientation (AGO). The 2x2 model splits mastery and avoidance goals into two as mastery-approach and mastery-avoidance; performance-approach and performance-avoidance (Lochbaum et al., 2016; Üztemur, 2020). It is one of the models advanced by Elliot and Harackiewicz (2015) in a bid to conceptualise the AGO variable as a means to explain students' motivations to objective goal setting towards learning. In the 2x2 model, achievement goal orientation is viewed as a description of students' perception of the achievement preference which results in approaching academic tasks for success or avoiding academic tasks to do away with failure (Kösterelioğlu, 2018). Moreover, the 2x2 achievement Goal Orientation Model has been successfully adopted in a study conducted among secondary school adolescents in Kenya, which is a relatively similar context to the Ugandan setting (Ng'ang'a, 2018). The 2x2 AGO model feeds into the Self Determination Theory (SDT) to underpin this current study since achievement goals are meant to be self-determined though one may adapt an achievement goal orientation dimension based on environmental and social expectations.

However, the usefulness of AGO model in this study offered sufficient description of constructs in which achievement goal orientation dimensions are embedded. Therefore, much as SDT was the basis for explaining the link between AGO and academic engagement, the measurement of AGO as a variable was based on AGO model.

Student engagement has been conceptualised as a student's active participation in academic activities, and commitment to educational goals and learning (Christenson et al., 2012 as cited in Sökmen, 2021). Academic engagement concept has been expressed in a number of terminologies including student engagement, school engagement, student engagement in schoolwork and engagement in class (Alrashidi et al., 2016). A four-component model that describes academic engagement constructs as behavioral, emotional, cognitive, and agentic engagement advanced by Reeve (2003) was adopted by this study.

The aforementioned four component model advanced by Reeve builds from that of Fredricks et al. (2004), which included three sub-constructs of academic engagement conceptualised as: behavioral, cognitive and emotional engagement. *Behavioral engagement* is defined as the degree to which students are actively involved in, and adhere to classroom activities. Behaviorally engaged students portray active learning characteristics and dedicate their time and energy towards participating in the learning process. *Cognitive engagement* refers to the degree of mental commitment, and involvement that learners demonstrate in their educational pursuits.

Cognitive engagement among students is characterised by reflection, critical thinking, and the learners' ability to establish links between newly acquired information and their pre-existing knowledge. The individuals exhibit a drive to comprehend and proficiently grasp the subject matter (paragraph two). *Emotional engagement* refers to the students' sense of affective connection and investment in their educational encounters.

Emotional engagement encompasses not only the affective involvement of students, but also their capacity to regulate their emotional states, cope with stress, and demonstrate persistence in the face of obstacles. In addition to the three sub-constructs, Reeves and Tseng (2011) added the fourth, *agentic engagement*, which refers to the extent to which students perceive themselves as having the ability to constructively contribute towards the flow of the instruction they receive. Students assume an active role in directing and shaping their educational experiences as agents of their own learning process. Agentially engaged students possess a strong belief in their capacity to achieve success, establish ambitious objectives, track their advancement, and assume accountability for their personal learning. They demonstrate a proclivity towards self-regulation and proactively pursue avenues for personal and professional advancement. The Agentially engaged students take an active role in their educational journey.

From the above explanations of academic engagement sub-constructs, it is clear that Self-Determination Theory (SDT) underpins these variables by presenting a nuanced view of motivation. The SDT asserts that meeting three fundamental psychological needs (autonomy, competence, and relatedness) motivates individuals to engage in activities geared toward achieving goals. In

the context of academic engagement, this manifests as follows: Behavioral engagement involves active student participation in learning when they experience autonomy (e.g. when they are rewarded for depicting observable positive academic engagement behaviors), competence (e.g., mastery experiences), and connection to teachers, peers and the academic content to learn. Emotional engagement, characterized by positive emotions toward learning and school life, emerges when students perceive the fulfillment of their needs, leading to increased enthusiasm and enjoyment in the learning process.

Cognitive engagement, rooted in deep thinking and commitment to learning, results from intrinsic motivation fostered by autonomy and competence. Students actively pursue knowledge and understanding when they feel ownership of their learning and believe in their ability to succeed. Agentic engagement, reflecting internalized motivation, involves students taking initiative and responsibility for learning, driven not solely by external rewards or pressures but by the fulfillment of their psychological needs. Consequently, SDT provides a robust framework for understanding not just the "what" of student engagement but also the "why," offering valuable insights to promote deeper, more meaningful self-determined learning experiences (Guay, 2022). The Social Cognitive Theory explains the diverse environmental factors that influences the aforementioned academic engagement dimensions.

Another important concept to be investigated in this study is students' self-efficacy (mediation variable) which Bandura defines as an individual's belief in their capabilities to exercise control over their level of functioning despite the variation in the environment within which they operate (Bandura et al., 1996).

In an education context, self-efficacy is conceptualised as an individual's belief (conviction) that they can successfully achieve at a designated level on an academic task or attain a specific academic goal (Dogan, 2015; Dullas, 2018). Self-efficacy beliefs are depicted in three constructs which include Academic Self-efficacy, Social Self-efficacy and Emotional Self-efficacy (Duchesne et al., 2019). The three sub-constructs of self efficacy are rooted in Bandura's broader theory of self-efficacy (Bandura et al., 1996). Bandura conceptualized self-efficacy sub-constructs as social, emotional and academic self-efficacy.

Social self-efficacy refers to a student's belief in their ability to effectively engage in social interactions and navigate social situations within an educational setting. It encompasses a student's confidence in their capacity to communicate, collaborate, and build positive relationships with peers and teachers. Social self-efficacy is a crucial aspect of a student's overall academic experience and well-being in school, as it can influence their participation in group activities, their willingness to ask questions, and their ability to seek help when needed. Emotional self-efficacy in an educational setting refers to a student's belief in their ability to understand, manage, and regulate their emotions effectively in the context of learning and academic activities. It involves a student's confidence in their capacity to cope with emotional challenges, handle stress, and maintain emotional well-being during their educational journey.

Academic self-efficacy means an individual's belief in their own ability to successfully complete academic tasks, attain educational goals, and perform well in educational settings. It involves a person's confidence in their academic capabilities and their belief that they can effectively learn, understand, and master the content and skills necessary for success in school. Self-efficacy may have an effect on the relationship between achievement goal orientation and academic engagement.

Self-efficacy also plays a pivotal role in shaping goal-directed behaviors and academic outcomes. Specifically, adolescents facing economic disadvantages often encounter unique challenges that can impact their academic engagement. Examining how self-efficacy may mediate the relationship between achievement goal orientation (the cognitive framework guiding one's approach to tasks) and academic engagement can provide insights into the psychological processes influencing students in low socioeconomic status contexts. Understanding the mediating role of self-efficacy may disclose mechanisms through which achievement goal orientation influences academic engagement and shed light on potential intervention to enhance educational experiences for adolescents in economically vulnerable settings. A comprehensive examination can contribute valuable knowledge for designing targeted strategies aimed at fostering positive academic outcomes in challenging socio-economic environments.

Understanding the terms achievement goal orientation, self-efficacy, and academic engagement is crucial for unraveling the intricate dynamics that shape students' academic experiences. To come up with valuable insights that can inform strategies to enhance student overall success in the academic

domain, this study examined the interplay between these study variables in order

1.1.4 Contextual Perspective

The existing research findings from Western industrialised contexts indicate that achievement goal orientation is a key predictor of academic engagement. For instance, in a book chapter by Wigfield and colleagues, it was concluded that in Western industrialised contexts, when adolescents were given freedom to build their competence, they scored highly on academic engagement (Wigfield et al., 2015). Such study findings highlight the problem noted earlier, regarding underrepresentation of the majority poor in as far as assumptions on academic engagement are concerned. The existing assumptions and conclusions are still being made based on a very small population within the Western industrialised societies which are not representative of the global population, thus making the existing literature inadequate to incorporate global diversity.

A longitudinal study conducted among French Canadian grade seven adolescent students also found that high mastery goal orientation predicted high behavioral and cognitive engagement (Duchesne et al., 2019). Elliot and Harackiewicz (2015) conducted an experimental study among Western undergraduate students in the University of Wisconsin-Madison and found out that those who adopted approach goal orientations were more academically engaged than their counterparts inclined to avoidance goal orientation. However, a key unresolved question is whether secondary school adolescents from low-resource education settings, such as in Uganda, also adopt achievement goals dimensions.

Apart from Achievement goal orientation dimensions, self-efficacy has also been found to impact students' academic engagement at different education levels. For example, a study conducted among Turkish adolescents found out that self-efficacy built through teacher feedback and mutual respect significantly predicted academic engagement scores (Sökmen, 2021). Similarly, a study conducted among university students in Pakistan found out that high scores on self-efficacy scale predicted high academic engagement and positive learning outcomes (Nasir & Iqbal, 2019). A number of studies have found out that academic engagement levels among adolescents declined as they progressed in school. Severe disengagement was particularly experienced by adolescents and children from disadvantaged backgrounds. Western adolescents from low socioeconomic backgrounds experienced severe decline in academic engagement as they advanced in school (Wigfield et al., 2015). Other scholars advanced that Adolescent disengagement was mainly attributed to school boredom, lack of emotional support from teachers and peers, poverty related challenges, and parentified childhood. However, their engagement was related to self-efficacy, self-esteem, perceived social support from family and school (Fredricks et al., 2019).

However, an otherwise rigorous literature review conducted among 104 studies investigating academic engagement among adolescent students in the world did not include a single study from Africa. This means that theoretical perspectives made regarding academic engagement are derived from a small sample leaving the majority-world under represented (Salmela-aro et al., 2021). This presents a knowledge gap worth investigating.

Uganda has the world's second youngest population living in poverty, her academic engagement dynamics may have greater challenges than those in other contexts as advanced by the past researchers aforementioned. Moreover, in 2018, Uganda Bureau of Statistics' (UBOS) report indicates that thousands of the adolescents (24%) who had joined secondary school failed to complete Advanced-level. In addition, subsequent reports show that most did not like schooling and were not interested in academic tasks (UBOS, 2018; UNICEF, 2019). The reports by UBOS and UNICEF imply significant academic disengagement among secondary schools in Uganda. Moreover, in Southwestern Uganda, specifically Kabale District, only 37.4% of the secondary school going adolescents are in school, with 79.4% of adolescents aged 15 and above having not completed senior four (UBOS, 2018).

Upon realising the challenges highlighted in the aforementioned statement, organisations to support students such as Compassion International, whose goal is to release children from poverty through education access among other support aspects, was introduced in Kabale District, Southwestern Uganda (<https://www.compassion.com/home.htm>). For decades, Compassion International has put effort in addressing developmental needs of underprivileged children and adolescents through quality education access and mentorship (Mugisha, 2021). Compassion International is a renowned Christian non-profit organisation that offers holistic assistance to underprivileged children and adolescents (Compassion International, 2013). Since 1993, Compassion International has been actively engaged in aiding children and their respective communities in Southwestern Uganda, with particular emphasis on education, health, and holistic welfare to disrupt the perpetuation of poverty.

Their efforts facilitate children's access to quality education by offering financial assistance for school fees and providing scholastic materials and mentorship programmes (Mugisha, 2021).

Despite the existing intervention in the region, it is not known whether the Compassion International support beneficiaries' academic engagement dynamics differ from non-beneficiaries. Moreover, Nyakato et al., (2021) in their study about adolescents' perceptions of growing up in rural Southwestern Uganda revealed that adolescents were prone to adverse experiences associated with low resource family backgrounds and were likely to drop out of school. The dearth of studies examining academic engagement and associated psychological factors among adolescents in secondary schools in the region presented a research gap. Thus, this study addressed the existing gap by investigating academic engagement and how it is predicted by achievement goal orientation and self- efficacy among Compassion International support beneficiaries and none-beneficiaries in Kabale District, Southwestern Uganda.

1.2 Statement of the Problem

Academic engagement is crucial for positive educational outcomes among adolescents, particularly during a developmental stage marked by the ability to autonomously set learning goals, embrace challenging academic tasks, and build self-confidence. Achievement goal orientation significantly influences this engagement as it determines whether students approach or avoid academic challenges (Senko, 2016). Furthermore, a student's self-efficacy beliefs can profoundly impact the relationship between achievement goal orientation and academic engagement. Thus, effective academic engagement among

adolescents may be closely linked to enhanced achievement goal orientation and self-efficacy beliefs.

In the context of Uganda, the 2018 UBOS report highlighted alarming statistics, revealing that only 35% of secondary school students completed senior four, with a mere 24.8% advancing to senior five, implying low levels of academic engagement (UBOS, 2018). Research by Nyakato et al. (2021) underscores the challenges faced by adolescents from low socioeconomic backgrounds in rural Southwestern Uganda, who often prioritize income-generating activities over academic pursuits. Additionally, organizations such as Compassion International provide support to low-income families, aiming to improve access to quality education (Mugisha, 2021).

Despite the importance of achievement goal orientation and academic engagement, there remains a significant research gap concerning these variables among student populations in low-income countries like Uganda. Specifically, the role of self-efficacy as a mediator in the relationship between achievement goal orientation and academic engagement among secondary school adolescents in Southwestern Uganda is not known. In addition, other context-based factors that influence academic engagement among adolescents students in Southwestern Uganda have not been investigated. This presented a critical empirical research gap about the study variables. To bridge the existing research gap, this study examined achievement goal orientation, self-efficacy and other factors influencing academic engagement among adolescent students in Kabale district, Southwestern Uganda secondary schools.

1.3 Purpose

To examine the effect of achievement goal orientation, self-efficacy and other context-based factors on students' academic engagement among adolescent students in Kabale district, Uganda.

1.4 Objectives

The study was guided by the following objectives:

1. To assess demographic variations in achievement goal orientation levels among adolescent students in Kabale District, Uganda.
2. To analyse demographic variations in self-efficacy levels among adolescent students in Kabale District, Uganda.
3. To investigate demographic variations in academic engagement levels among adolescent students in Kabale District, Uganda.
4. To analyse the mediation effect of overall self-efficacy on the relationship between achievement goal orientation and academic engagement among adolescent students in Kabale District, Uganda.
5. To explore context-based factors that influence academic engagement among Compassion International support beneficiary and non-beneficiary adolescent students in Southwestern Uganda.

1.5.0 Scope

1.5.1 Geographical Scope

The study was carried out among Compassion International support beneficiary and non-beneficiary adolescents in secondary schools in Kabale district, Southwestern Uganda. Kabale District is one of the highly populated areas in Uganda with majority youth exposed to poverty-related adversity which may compromise their academic engagement potential (Nyakato et al., 2021).

Nonprofit organisations, Compassion International inclusive, provide support to enhance quality education and access for some of the disadvantaged children in the region. Compassion International support beneficiaries are identified as a vulnerable group of students who may experience unique challenges related to poverty and lack of family support as they pursue their academic journeys. The 800 Compassion International supported adolescents are distributed in about 10 secondary schools in Kabale District, Southwestern Uganda hosting about 5000 others. Of the 10 schools, only two collaborate with Compassion International to admit about 380 supported adolescents on subsidised school fees within a population of 2000 others. The population within the two schools (2380 adolescents) was considered for this study. The rationale for selecting the Compassion International support beneficiaries was based on the vulnerability of this group which results from poverty adversity which can compromise their academic engagement.

The contribution of the study results to the body of existing knowledge on academic engagement and other factors that influence it among disadvantaged populations is critical. To ensure adolescents' successful interventions focusing on enhancing positive education outcomes in low income countries, an examination of their academic engagement and its predictors such as AGO and self-efficacy beliefs is vital. The Compassion International non-beneficiaries could have developed within supportive environments enabling them to sufficiently engage in academic tasks. Therefore, including non-beneficiaries of Compassion International in this study as a control group was critical for comparison purposes.

1.5.2 Content Scope

The content of this study focused on students' achievement goal orientation, self-efficacy and academic engagement. Inferred to this study, achievement goal orientation was looked at in four dimensions of motivational drives adopted by adolescents in a bid to attain their secondary school education goals. The four dimensions included mastery approach, mastery avoidance, performance approach and performance avoidance achievement goal orientation (already defined in section 1.1.3). The study considered academic engagement to mean effort, commitment and active participation, enthusiasm and the students' freedom to contribute towards the content to be studied in order to achieve their academic goals.

The study's focus was on the adolescent's ability to portray observable actions towards learning, comprehension of the learned content and inferring it to their environment, emotional connection towards learning and active involvement in making decision regarding what and how best to learn. Part of what this study focused on was whether adolescents' preference of an achievement goal orientation type was associated with their academic engagement levels and whether considering context-based factors influenced the phenomenon. This study further examined whether achievement goal orientation adoption influences academic engagement through self-efficacy beliefs. According to this study, self-efficacy was looked at as an individual's conviction in themselves as possessing the capacity to successfully engage in academic tasks. This study focused on self-efficacy as adolescents' belief that he/she possesses the potential to sustain meaningful relationships, has emotional control and can persistently engage in learning amidst challenging situations.

The aforementioned aspects of self-efficacy were rooted in social, emotional and academic self-efficacy exhibited by adolescents in secondary schools. An adolescent's self-determined conviction such as "I will successfully accomplish this task no matter how difficult it may be!" may also require affirmation from teachers, parents and peers who may say, "you can make it! I believe in your potential!" to enthusiastically engage in academics. Self-efficacy is very critical since it affects one's perception of their ability to successfully accomplish a given task in a diverse manner (Gerbino, 2020). More so for adolescents whose developmental stage is characterised by onset of the ability to autonomously set learning goals, enjoy challenging academic work and build their confidence in accomplishing novel tasks. It was therefore critical to examine the role of self-efficacy and other context-based factors on achievement goal orientation and academic engagement.

This study looked at an adolescent as a student (12- 21 years old) pursuing secondary school education within senior one, two, three or five. Singh et al. (2019), infer the definition of an adolescent from world health organization (WHO) report as a person between the ages of 10 to 19 years. According to this study, an adolescent was defined according to Nienstein et al. (2009) chronologic definition which states that an adolescence refers to a developmental period between childhood and adulthood with sub stages ranging from 12 to 24 years depending on gender (See Curtis, 2015). For this study an adolescent meant a secondary school student within the age range of 12 to 21 years.

The researchers could scarcely find an adolescent at the age of twelve in a secondary school due the effect of Covid- 19 pandemic which halted the education progress of learners because of lockdowns. Most of the students in senior one were 13 years with only a spoonful at 12 years while senior five students were mainly 21 years and above. To include both ordinary and advanced levels of secondary school education, the researchers included some adolescents at the age of 21 years.

1.5.3 Time Scope

This study was conducted between 2019 and 2023. From 2019 to mid-2020 the coursework part made up of two semesters with active lectures and examinations was done. Between late 2020 and half of 2022, a proposal was developed and submitted to the school of Education, Kyambogo University. The period between late 2022 to February 2023 was for the fine tuning of data collection instrument, and initial data collection. The period of 2022 to 2023 was for the data collection, data management, analysis, report writing and fine tuning the final thesis draft. December 2023, publications were made, the final thesis draft submitted for examination and public defense done. Literature that was published between 2015 and 2023 primarily informed the study. Seminal theories and other important literary data that were published earlier and have not been modified were included.

1.6 Significance of the Study

Knowing about learner achievement goal orientation preferences can help students to better direct their learning towards achievement goals that result in better learning outcomes. This consequently results in successful education outcomes.

School stakeholders such as headteachers, directors of studies, teachers and parents-teachers association (PTA) leaders may use findings of this study to implement possible context-based strategies for strengthening students' academic engagement leading to better results, within low resource education settings.

Non-Governmental Organisations such as Compassion International, concerned with better adolescent lives may use the study findings as a basis to design appropriate interventions for improving adolescent education. A summary of the research findings will be provided to Compassion International project centres and it can be a point of reference for stakeholders during the evaluation and implementation process.

Ministry of Education Curriculum designers and implementers may use the findings of this study to get a broader view about the learning dynamics among adolescents in low socio-economic settings contributing to the knowledge base that informs successful curriculum implementation and evaluation. A summary of the research findings could be provided to schools as a point of reference for stakeholders during the curriculum implementation and evaluation process.

Future researchers may use the study findings as a foundation for interventional research concerning enhancement of students' academic

engagement in low socio-economic contexts. For example, results about the mediation effect of self-efficacy on the relationship between achievement goal orientation and academic engagement may serve as a source of gaps for future research.

1.7 Conceptual Framework

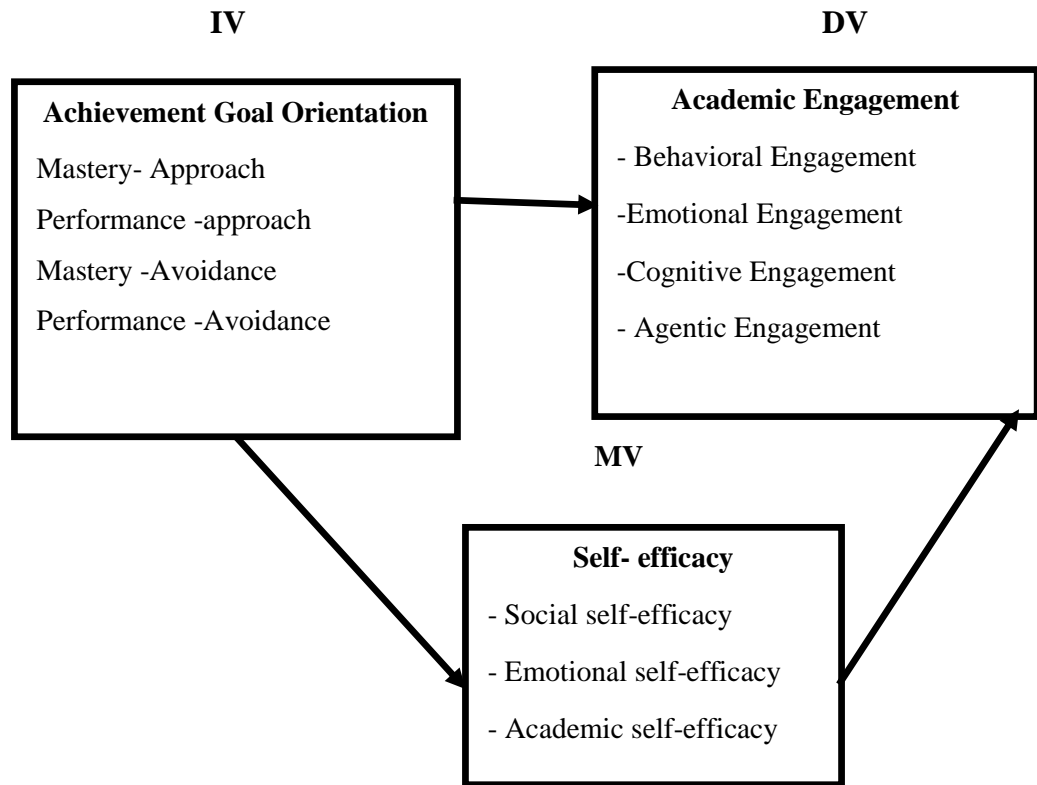


Figure 1. *The Relationship between Achievement Goal Orientation, Self-efficacy and Academic Engagement (adopted from Bandura, 1996; Harackiewicz & Elliot, 1993; Fredricks et al., 2019; formulated by the Researcher)*

Figure 1 is a conceptual framework depicting the mediation effect of self-efficacy (MV) on the relationship between achievement goal orientation (IV) and academic engagement (DV). In the current study, it was predicted that students' achievement goal orientation (Independent Variable) is a key determinant for their engagement in academic work. Students' achievement

goal orientation dimensions included; approach- avoidance dichotomy which is normally referred to as a 2×2 achievement goals framework. It is comprised of mastery approach (MAP), mastery avoidance (MAV), performance approach (PAP), and performance avoidance (PAV). These interrelated yet distinct AGO constructs are theorized as the primary factor that sets a stage for students' engagement in academic tasks.

However, there are other factors like self-efficacy beliefs which can influence secondary school adolescents' ultimate academic engagement despite the AGO dimensions they adopt. In the direct link, achievement goal orientations (Independent Variable) adopted by secondary school adolescent students should potentially influence academic engagement (Dependent variable). It is predicted that students who adopt approach achievement goal orientation will score highly on academic engagement whereas those inclined to avoidance achievement goal orientation will have low scores on academic engagement levels.

In the mediated relationship, self-efficacy falls under factors that influence the relationship between achievement goal orientation and academic engagement among adolescent students. Achievement goal orientation and self-efficacy explain students' devotion to purposeful educational activities in secondary school (Gimeno-Gilles et al., 2016). In fact, self-efficacy denotes that apart from one's competence, the student's positive belief in the possibility to successfully accomplish academic work inspires them to engage effectively.

However, an individual with low self-esteem, despite the achievement goal orientation type adopted, may not effectively engage in academic work. Self-efficacy and achievement goal orientation have also been proposed as

resources that can enable individuals to effectively cope with academic stressors by providing individuals with a sense of control and positive appraisals of one's ability to do well (Mythili, 2020). It can be argued that self-efficacy buffers the effects of achievement goal orientation skills which consequently enhances increased academic engagement among adolescent students.

Conversely, lower levels of self-efficacy are expected to hamper the predictive impact of achievement goal orientation on the students' academic engagement. This study examined the mediation role of self-efficacy on the relationship between achievement goal orientation and academic engagement because, based on the links between variables as depicted in the conceptual framework, it is critical to understand the interaction effects among the study variables. It was not known whether there are variations in the effect of achievement goal orientation on academic engagement results from context-based factors. Findings of this study explain the aforementioned gaps.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter deliberates on the works of other scholars that bear insight on achievement goal orientation, self-efficacy and other context-based factors that influence academic engagement. The review of the scholarly literature is structured into sections: Conceptual review, theoretical review, and empirical review. The discourse of the literature in section three is patterned according to the objectives of the study. Gaps identified are formulated into hypotheses and research questions in line with the objectives of the proposed study.

2.1. Theoretical Review

In this theoretical review, a number of theories and models that offer formidable explanations of the foreseen relationships between achievement goal orientation, self-efficacy and academic engagement were surveyed. The review was presented according to the order of variables.

2.1.1 Theories Linking Achievement Goal Orientation to Outcome Variables

2.1.2 Achievement goal theory (AGT)

The independent variable of this current study is achievement goal orientation which was defined by Elliot and Murayama (2008) as an individual's perception of the reasons for engaging in a given task which serves as a guide for future behavior. Therefore, achievement goal orientation concept as a predictor variable can be explained by Goal Orientation Theory which states that students have distinctive orientations towards a certain type of goal (Monteiro et al., 2018). For example, students categorised under Mastery goal orientation

dimension engage in academic tasks to be challenged by new knowledge, are curious to know new ways of solving academic puzzles and desire to master learned content. Conversely a student who is performance goal orientation based engages in academic tasks because they desire to score good grades compared to their counterparts, they expect rewards and recognition as the best compared to their counterparts, as this is valuable to them.

The achievement goal orientation theory has been used alongside self-determination theory to understand the cognitive, behavioral and emotional patterns associated with goals in sports and other learning context. The AGT explains how the two climates i.e., task-involving and ego- evolving climates determine ones drive to competence gain where by a task-involving climate encourages an individual to work hard to achieve both individual and collective goals (Monteiro et al., 2018). For example, in a school context, when teachers encourage learners to engage in challenging tasks, they tend to be more motivated and will have a strong bond to such a learning environment. However, AGT negates the self-determined behavior that result from the contextual factors well stipulated by the Self-determination theory (Ryan & Deci, 2020).

2.1.3 Expectancy-value theory (EVT)

Expectancy-Value Theory (EVT) advanced by Eccles et al. (2015) is a theory of motivation which stipulates that motivation is based on two major factors that is expectancy and value. By expectancy they mean one's expectation to succeed on a given task and value simply refers to the extent to which an individual attaches importance to a task (Wigfield et al., 2015). When it comes to adolescent students' motivation to engage in academic tasks, the EVT assumes

that a student will likely persist on doing an academic task however challenging it may be as long as they expect to excel and master skills derived from the same task. Similarly, when an adolescent student attaches value to an academic task, they will be emotionally engaged and consequently score highly on behavioral engagement (Olivier et al., 2019). Such behaviors in a teaching/learning context depict mastery achievement goal orientations and how it influences academic engagement through student desire to learn and master classroom assignments. As such, if students value learning they will feel competent in class and prior competence will likely influence their expectation of the future success.

However, despite the value and expectations of students as they engage in learning, they may as well be influenced by students' own interpretations mainly geared by the inner mechanisms. Hence, the EVT may not fully explain the associations among the current study variables. This study was therefore hinged on self-determination theory and social cognitive theory which are fully explained in sections 2.2.4 and 2.2.5.

2.1.4 Self-Determination Theory (SDT)

This study was primarily hinged on Self-Determination Theory (SDT) to explain the link between adolescent students' academic achievement goal orientation and academic engagement. The Self-Determination Theory, developed by Deci and Ryan (2008), postulates that students experience varying levels of motivation that often depend on the extent to which they feel their actions are self-determined (Ryan & Deci, 2020). Feeling self-determined depends on previous experiences of competence, autonomy, and relatedness. Competence means that the student feels they can successfully accomplish an activity with some level of facility. Autonomy means that one feels they are in

control of the process of pursuing an outcome such as academic tasks accomplishment. Relatedness is when a student feels meaningfully connected to those around him or her. The more often these experiences occur, the higher and more durable the motivation tends to be. Self-Determination Theory (SDT) is a macro-theory of human motivation, emotion, and development that takes interest in psychological factors that influence a person's wellbeing such as a desire for mastery of challenging skills, need to gain independence to control their behavior as they pursue their goals (Reeve et al., 2018). Hence, as earlier justified, it helps in explaining human motivation, personality, social development, and overall psychological functioning.

Based on Self-Determination Theory, it can be suggested that a high approach achievement goal orientation dimension is positively associated with high academic engagement among adolescent students in secondary schools. Conversely, adolescent students with high avoidance achievement goal orientation have low academic engagement levels. The level of achievement goal orientation influences the way adolescents perceive competence hence prompting them to either actively manipulate their learning circumstances to succeed on given academic tasks or avoid engaging in academic tasks that they perceive as 'difficult' in order not to be categorised as incompetent. The current study, based on SDT assumes that when the self-determined needs of an adolescent (autonomy, relatedness and competence) are met, the student will adopt achievement goal orientation dimensions that facilitate engagement in academic tasks.

However, the theory negates the fact that an individual's successful engagement in academic work may as well be influenced by external factors

and individual perception of the impact of these factors. For example, receiving approval from peers and teachers can increase one's confidence in their ability to accomplish academic tasks despite their level of competence (Fredricks et al., 2019).

2.1.5 Social Cognitive Theory (SCT)

The Self Determination Theory was complemented by the Social Cognitive Theory (SCT) by Bandura (1977, as cited in Tudents, 2020) to explain the impact of self-efficacy on students' engagement and its mediation role on the relationship between achievement goal orientation and academic engagement. Bandura in his Social Cognitive Theory emphasises that human learning takes place in a social environment with a dynamic and reciprocal interaction of the person, environment and behavior (Camp & Surum, 2018).

Person's variable includes cognitive factors such as student's self-efficacy beliefs which emerge from personal experiences, vicarious experiences and feedback from others. So other context-based factors other than self-efficacy that influence academic engagement is critical. As Bandura emphasises that learning is an internal mental process which can be affected by an interplay of both internal and external factors experienced by an individual (Castillo et al., 2020), a combination of both SDT and SCT explains the influence of self-efficacy on the relationship between achievement goal orientation and academic engagement. It is critical to recognise that much as students self-determined behaviors are important for learning engagement, self-efficacy beliefs have an influence on an individual's commitment to learning. For example, a meta-analysis of 26 studies concluded that increasing student's self-efficacy increased academic engagement (Chang & Chien, 2015). Adopting SCT as a

complementary theory to explain the relationships among achievement goal orientation, self-efficacy and academic engagement is critical for this study. This current study assumes that an adolescent who competently utilises interactions within the learning environment such as useful communication with peers and instructors will successfully engage in academic tasks.

In addition, an individual who is motivated to autonomously attempt challenging tasks and is well connected to the school, peers and academic content will successfully engage in learning. Finally, it is assumed that learning is influenced by both personal and environmental factors and an individual's self-efficacy beliefs will influence academic engagement despite one's level of competence.

The two theories complement each other in explaining the links between achievement goal orientation, self-efficacy and academic engagement among adolescent students. While Self-Determination Theory (SDT) emphasizes the importance of intrinsic motivation and autonomy, suggesting that students are more engaged when they feel self-determined; Social Cognitive Theory (SCT) emphasizes the role of self-efficacy, observational learning, and reciprocal determinism. According to SCT, students with high self-efficacy believe in their capability to succeed in academic tasks, which enhances their motivation, persistence, and effort. Observational learning allows students to model behaviors and attitudes of successful peers and mentors, further boosting engagement. Reciprocal determinism highlights the interaction between personal factors, behavior, and the environment, suggesting that supportive school environments and positive peer interactions can reinforce academic engagement.

However, these theories assume contexts with available resources and supportive environments, potentially overlooking challenges in low-income settings like Uganda, where external factors such as poverty, limited access to educational materials, and socio-economic pressures may significantly impact students' achievement goal orientation, self-efficacy, and academic engagement.

2.2. Empirical Review

2.2.1 Conceptual Review

The conceptual review considered the meanings and measurement or determination of the study variables. Works done by a number of scholars to define and refine the understanding of the variables under this study are also reviewed.

2.2.2 Achievement goal orientation

Though achievement goal orientation variable is rooted in the works of Dweck (1986) and Nicholls (1984) as cited in Poortvliet (2020), the construct has since then become one of the most frequently investigated variables in Education at different levels including primary, secondary, higher education, teacher training, athletics training and workplace training (Acharya & Nayak, 2018; Alhadabi & Karpinski, 2020; Kösterelioğlu, 2018). Achievement goal orientation has been demonstrated in a series of ways as; a dichotomous model of motivational goal approach including the mastery versus performance goals. Later on, motivations behind learning versus performance (Elliot & Dweck, 1988); task-focused and ego-involvement goals versus ability-focused goals (Maehr & Anderman, 1993; Maehr, Midgley, 1991 & Nicholls 1984,) and

mastery versus ability (Ames, 1992; Ames & Archer, 1988) as cited by Nazarieh, (2015).

Later on, achievement goal orientation was defined as an individual's motivation for approaching and engaging in academic tasks reflected by the frameworks that explain an individual's perception, interpretation and reaction in an achievement situation (Elliot et al., 2011). In other words when students have set their own academic goals, they appreciate their working progress and are able to keep focused even when they encounter difficulty with performing certain tasks. Achievement goal orientation has also been defined as an individual's set of beliefs that reflect the reasons why they approach and engage in academic tasks (Lin, 2019). Compared to other learning motivation definitions, achievement goal orientation demonstrates students' objective goal setting within their learning process.

In a bid to understand the multidimensional nature of AGO variable, researchers have advanced diverse conceptualisation opinions. These range from mastery and performance goals (Dweck & Leggett, 1988); mastery, performance-approach, and performance-avoidance goals normally referred to as a trichotomous model (Elliot, 1999; Elliot & Church, 1997); then a 2x2 model which splits mastery and avoidance goals into two as; mastery-approach and mastery-avoidance; performance-approach and performance-avoidance (Lochbaum et al., 2016; Üztemur, 2020); and finally, a 3x2 model which includes Task-Based (task- approach and task- avoidance) , Self-Based (self-approach and self- avoidance), and Other-Based (approach and avoidance) achievement goals. The 3x2 achievement goal orientation model was developed to specify the distinction between task-oriented competence and self-oriented

competence within the mastery goals in a single rubric (Elliot et al., 2011). A 2x2 Achievement Goal Orientation Model representing the two dimensions (approach and avoidance) split embedded in mastery performance goals.

A learner may adopt a goal orientation dimension to approach an academic task to master skills or may avoid tasks in which they deem themselves unable to master. Alternatively, a learner may adopt a goal dimension to approach a task in order to outperform their counterparts or may avoid a task which they deem difficult to avoid being perceived as incompetent compared to their counterparts (Lochbaum et al., 2016).

The main aim of the differentiated models was to aid specific examination of what motivates students to endorse diverse goal orientations. For example, one may argue that an individual who is Mastery Approach (MAP) orientated as demonstrated by a 2x2 AGO framework, may work hard to gain more competence on a given task for self-skill enhancement or for the sake of successful completion of a task as explained by the 3x2 AGO framework. Conversely, students inclined to Mastery Avoidance Goal Orientation MAV, may avoid academic task which they deem difficult for them in order to avoid self-based incompetence. The 3x2 AGO framework splits MAV dimension into two i.e., task-avoidance or self-avoidance. By a task-avoidance a student's goal focuses on the avoidance of task-based incompetence e.g., "Avoid doing the task incorrectly" whereas with self-avoidance goals, a student's motivation is geared towards avoiding doing worse than their previous attempts. When it comes to performance goal orientations which include Performance Approach PAP and Performance Avoidance PAV, both the 2x2 and 3x2 AGO frameworks demonstrate the dimensions in a similar manner (Ileri, 2015).

The PAP is based on interpersonal evaluation in which an individual is motivated to gain in order to outperform their counterparts in pursuit of academic tasks. On the other hand, PAV goals are focused on avoiding doing worse than others (Mascret et al., 2017). Therefore, a 2x2 and 2x3 AGO frameworks highly overlap as seen from the above explanation as they demonstrate goals by competence definition and valence whether in a split manner or within the main Mastery goals. Some studies have adopted a 3x2 model to measure achievement goal orientations in a separate manner as six independent constructs among different samples (Elliot et al., 2011; Mascret et al., 2017; Yang et al., 2016) especially when linking goals to students' academic performance (Irerri, 2015).

However, the current study adopted the 2x2 goal orientation model because recent research has found out that the 2x2 model yielded better results in predicting students learning engagement (surface and deep learning) when the two models were compared (Üztemur, 2020). The 2x2 model has been successfully adopted in studies done in learning environments in contexts within developing countries (Ng'ang'a, 2018). A 2x2 framework is presented in two-dimension that explicitly define the way students describe their learning goals either in comparison with their personal experience with academic achievements or with their peers which Elliot termed as mastery and performance goals respectively.

The second dimension of the 2x2 framework is demonstrated in terms of valence which interprets competence as either positive or negative. In this, positive valence is when an individual is inclined to approaching success whereas negative orientation is when an individual's motivational goal is

avoiding failure (Erdem-Keklik & Keklik, 2013). The 2×2 dimensions are embedded in four achievement goal categories including mastery-approach (MAP), performance-approach (PAP), mastery avoidance (MAV), and performance-avoidance (PAV) goals (Lin, 2019; Poortvliet, 2020). Students inclined to MAP goals realise their academic goal achievement by knowledge and skill acquisition for the purposes of mastering academic tasks and developing higher self-competence. The PAP goals focus on demonstrating one's skills in comparison to other students. Mastery avoidance achievement goal orientation (MAV) involves students tending to avoid situations where they might not be able to learn the material or master the tasks. Finally, PAV goals focus on demonstrating one's skills to avoid unfavorable judgments about one's competence in comparison with their counterparts. Students in any learning environment either aim at attaining competence or avoiding displaying incompetence as they engage in academic tasks especially when their personal competence is at stake and success is uncertain (Duchesne et al., 2019; Lin, 2019).

Achievement goal orientation has a strong connection with students' self-efficacy. For example, a study done among new and old university students in Indonesia found out that MAP, MAV and PAP goal orientations were positively associated with self-efficacy in learning engagement (Simamora & Mutiarawati, 2021). The same study reveals that a 2x2 AGO model is the most suitable basis for categorising goal orientations for students as they are likely to have varying achievement goal preferences based on their evaluation of the previous experiences of failure and success in academic tasks. Similarly, a study done among Turkish high school students found that self-efficacy mediated the

impact of MAP, MAV and PAP goal orientations on high school students' engagement levels in Physical education (Erturan et al., 2020). Another study done among college students in the United States found out that self-efficacy and mastery avoidance goals were negatively associated (Cottrell, 2018). However, there is dearth of information concerning students' AGO among adolescents in low resource education contexts, Uganda inclusive.

2.2.3 Self-efficacy

Zimmerman, (2017) posits self-efficacy as an individual's judgements of their ability to carry out and succeed in academic work. Self-efficacy has been defined by a number of authors including Bandura et al., 1996, who conceptualised it as an individual's beliefs regarding how well they can perform the actions required to deal with potential situations. When an individual has low self-efficacy, they may practice with an expectation of improving performance but the outcome does not necessarily present as expected depending on their belief. So, self-efficacy expectations are beliefs about whether one can effectively perform the tasks necessary to produce the outcome (Shi, 2018).

Student self-efficacy is particularly vital in low resource education environments, since the effects of adverse experiences can be reversed an individual's self-efficacy. For example, one may say, "I can successfully accomplish this task no matter how hard I must work!". In an education setting, students' belief that they are capable of performing well on an academic task, will motivate them to work harder, persist in the task for longer periods of time and consequently perform well (Nasir & Iqbal, 2019). Others studies found variations in positive associations between self-efficacy and academic

achievement related to gender and study skills (Alhadabi & Karpinski, 2020; Hanum et al., 2017).

According to Bandura et al. (1996), an individual's success in accomplishing a task is a function of their strong belief that they can actually accomplish the task successfully and this can be developed through four major sources which include;

1. **Mastery Experience:** Individuals develop a strong belief in their personal efficacy when they are successful, while failure weakens this belief.
2. **Vicarious Experience:** The vicarious experiences provided by social models strengthen self-beliefs or efficacy. When individuals observe someone similar succeeding through sustained effort, their beliefs raise that they also believe they can succeed. Similarly, others' failure lowers observers' self-efficacy.
3. **Social Persuasion:** When Individuals are verbally persuaded that they can achieve given goals, they are likely to do sustained effort. On the other hand, self-doubts and thinking about personal deficiencies lowers effort level.
4. **Moods:** Emotional states of people influence the way they estimate their potential. Optimistic mood increases perceived self-efficacy, pessimistic mood reduces it.

The above sources of self-efficacy imply that individuals may have high levels of positive efficacy depending on their past experiences of success or failure on related tasks and the way they perceive the success or failure among their counterparts previously involved in similar tasks in their environment (Bandura, 2012) as cited in Minter and Pritzker (2017). For example, a student who has observed other students succeed in similar academic tasks, will likely

believe that they too can succeed and will work hard persistently to achieve in a similar manner.

In addition, words of affirmation an individual received from their social interactions and personal moods contribute to efficacy expectations. For example, a student whose peers and teachers always tell statements like, “You can make it! I believe in your potential!” and the self-fulfilling prophecy on the side of the student respectively such as, “I will successfully accomplish this task!” respectively can have their self-efficacy enhanced. Unfortunately, in low resource education settings, adolescent students are prone to adverse experiences which may not avail such an environment as described by Bandura. (1996). It is therefore critical to examine the role of self-efficacy and other context-based factors that influence adolescent students’ academic engagement in low resource education settings. Some scholars in academic context, have gone ahead to defined self-efficacy as an individual's conviction that they can successfully achieve at a designated level on an academic task or attain a specific academic goal despite the learning environment (Dogan, 2015; Dullas, 2018).

Self-efficacy beliefs impact ways in which an individual feels, thinks, and is motivated to behave when pursuing a specific goal. Self-efficacy beliefs affect one’s perception of their ability to successfully accomplish a given task in a diverse manner which may include emotional, academic and social networking perceptions (Gerbino, 2020). Based on the three aforementioned self-efficacy beliefs, three indicators (academic, social, and emotional self-efficacy) proposed by Muris, (2007) were considered in this study.

2.2.4 Academic Engagement

Academic engagement stems from the work of Astin (1999) on students' engagement, which he defined as, "the amount of energy that the student dedicates to the academic experience" (Davis, 2019). Review of definitions of student engagement categorised it in two broad sets. One set of definitions is embedded in student engagement reflected in desired outcome portrayed in student's thoughts, feelings, and behaviors about learning. For example, Chapman (2003) cited in Groves et al. (2015) defines it as "the students' cognitive investment in, active participation in, and emotional commitment to their learning". According to Kuh, (2009) as cited in Schindler et al. (2017), student engagement refers to the quality of effort and involvement in productive learning activities which enhance student success and academic attainment. Schaufeli (2013) defined student engagement as a fulfilling and positive study-related state of mind that is characterised by absorption, vigour, and dedication.

Another set of definitions refers to student engagement as a process involving both the student and the learning institution. For example, the National Survey of Students Engagement cited by Fredricks & Mccolskey (2018) advances student engagement as "the amount of time and effort students put into their studies and other educationally purposeful activities" as well as how the institution deploys its resources and organizes the curriculum and other learning opportunities to get students to participate in activities linked to student learning.

With the particular focus on adolescent students' academic engagement in secondary schools in Kabale district, Southwestern Uganda, the term student engagement and academic engagement were used synonymously in this study.

Here academic engagement refers to students' feelings of positive emotions toward academic work, doing academic tasks as personally meaningful activities, considering teacher and peer interaction and collaboration to be manageable, and having hope that they will successfully achieve their academic goals and education outcomes.

The uniqueness of adolescent student academic engagement dwells in the fact that academically-engaged adolescents will experience successful academic adjustment and are less likely to be involved in risky behaviors (Martín et al., 2021). Frederick suggested three dimensions to demonstrate students' academic engagement including (a) cognitive engagement (c) behavioral engagement (d) emotional engagement (Fredricks & Mccolskey, 2018). The academic engagement dimensions highlight indicators of students' commitment as they pursue their academic goals. The three dimensions are interrelated but distinct constructs can be used to reflect students' learning.

Cognitive engagement is a fundamental form of engagement embedded in the actual learning process, where students comprehend complex ideas and work persistently to master difficult skills (Qudsyi et al., 2020). Cognitive engagement can either be reflected by surface learning or deep learning. Surface cognitive engagement includes contributions that offer solutions without judgement or justification; repeating ideas without clarification; or general agreement with others without explanation or further contribution. Conversely, deep cognitively engaged learners are persistent in finding relevance in new information despite the difficulty and they face challenging tasks positively aiming at application of skills beyond base learning.

According to Appleton et al. (2006), as cited in Alrashidi et al. (2016), behavioral engagement refers to student's involvement in learning activities such as effort, persistence, attention and obeying school rules. Students who are behaviourally engaged are characterised by help seeking behavior from both their peers and teachers and offer help as well. They are good at planning, time management and goal setting. In school context, emotional engagement refers to students' feelings of connection to (or disconnection from) their academic work, peers, teachers and school (Kuok & Taormina, 2017). Emotional engagement has also been defined in a school context as students' feelings, interests, and attitudes towards learning and school (Wara et al., 2018).

Emotionally engaged students are curious about learning concepts with a desire to know more, portray positive energy towards learning and have positive attitude towards their school. Emotions are a key aspect for student adjustment to diverse learning experiences and among the roles of a teacher is to harness positive emotion for effective learning and teaching. This implies that adolescent students from low education resource setting are more likely to experience emotional engagement challenges which can only be minimised when investigated and appropriately planned for.

The National Survey of Student Engagement (NSSE) categorised student engagement into four themes including (a) level of academic challenge, (b) active and collaborative learning, (c) student-faculty interaction, and (e) supportive campus environment. The four themes encompass aspects similar to those reflected in the dimensions advanced by Frederick (2016) for example, the academic challenge theme includes high order thinking, quantitative reasoning, reflective and integrative learning which is basically cognitive

engagement (NSSE, 2020). Hence adolescents' successful studentship is depicted in student' readiness to persistently pursue challenging tasks, be behaviourally skilled for educational purposes and emotionally grounded to swim through challenges associated with the educational settings in the environment.

2.3 Achievement Goal Orientation and Demographic Characteristics

Considerable research has been done to examine demographic variations in achievement goal orientation among study participants in diverse contexts. For instance, a study done among Turkish adolescents found that whereas there were differences in age and achievement goal orientation whereby younger adolescents were more likely to adopt mastery approach and performance approach achievement goal orientation than older adolescents, there were no gender differences (Şahin & Kürkçü, 2016). A study done among Chinese adolescent students found inconsistency with the aforementioned findings whereby, there was gender variation in achievement goal orientation. In this study among Chinese, girls were more likely to adopt mastery avoidance achievement goal orientation and experienced high levels of learning anxiety (Kong et al., 2023).

Further studies have been done regarding socioeconomic variation in achievement goal orientation and different results have been established in participants' adoption of achievement goals and parents' socio-economic status. For instance, a study done among Ugandan prisoners on formal and vocational training revealed statistically non-significant variation in achievement goal orientation across all demographic characteristics (Aheisibwe & Rukundo, 2018). Similarly, Hussain Ch. et al. (2017) found out that there was statically

non-significant variation in achievement goal orientation and students' socioeconomic in Pakistan.

Moreover, previous researchers have advanced that achievement goal orientations are adopted differently. For instance, Ng'ang'a (2018) found out that among Kenyan adolescents, majority 67.5% (630) adopted mastery approach goal orientation, 15% (630) adopted performance avoidance, 12.5% (630) adopted performance approach goal orientation and only 2.5 % (630) adopted mastery avoidance achievement goal orientation. Interestingly, different achievement goal dimensions have been linked to critical academic outcomes. A case in point is a study by Subaşı (2020) who advanced an argument that avoidance goals were positively correlated with task value and academic efficacy among Turkish and Korean students. Subabi further argues that among Korean students, because of the collective cultures, avoiding negative consequences is very important. Students avoid being misunderstood by society around them and make effort to successfully achieve on a given academic tasks by avoiding those they deem difficult as they concentrate on tasks, they deem possible to avoid being ridiculed. This perception consequently leads to positive learning outcomes.

Notably, past research further advanced varying augments regarding context-based factors that influence achievement goal orientation among students. For instance, results from an investigation conducted on French Canadian adolescents revealed that their perception of emotional support from teachers had a significant impact on their endorsement of mastery achievement goals orientation, particularly when they perceived themselves as competent (Smith et al., 2022).

In addition, research conducted among American high school students found that performance approach achievement goal orientation was linked to students' self-determined intense aspiration to surpass their peers, which originated from familial expectations and internal pressure to meet parental anticipations (Kim et al., 2020). The contradictions in the previous study findings present practical gap that calls for the effective context-specific interventions to enhance positive achievement goal orientation.

2.4 Self-Efficacy Levels and Demographic Characteristics of Adolescent Students in Secondary Schools in Kabale district, Southwestern Uganda

Past research has demonstrated demographic variations in self-efficacy, for instance a meta-analysis of gender differences in self-efficacy levels across western industrialised educated rich and democratic communities denoted as WIERD (UK, Austria, China, USA, Chile and Spain) reported variation in self-efficacy and gender whereby females had higher e-learning self-efficacy than their male peers (Yu & Deng, 2022). On the contrary a study done among Norwegian University students stipulates that females had significantly lower self-efficacy levels than their male peers (Fallan & Opstad, 2016), Similarly, a longitudinal study among university students in USA by Robinson et al. (2022) reported that female students had lower academic self-efficacy than their male peers even when both categories had the same prior achievement and outcomes. On the contrary, research findings by Mansor and Norwati, (2013) suggest there was no statically significant difference in self-efficacy levels and gender.

Regarding variation in age and self-efficacy levels, Campos et al. (2019) found out among adolescents in Curitiba public schools there was a statistically significant difference in age and self-efficacy levels in physical activity

whereby younger adolescents had higher self-efficacy than their older counterparts especially when they received social support from their parents and peers.

Lee et al. (2022) found out Korean adolescents from low income families whose parents did not attain higher education were likely to have low self-efficacy. Parents income is yet another demographic characteristic that has been associated with adolescents' self-efficacy. For instance, a study conducted by Hussain Ch. et al. (2017) among adolescent students stipulates that parent's income level did not have a significant relationship with students' self-efficacy levels. However, in a study conducted by Tan et al. (2023) in 69 countries found out that family socioeconomic status had a positive relationship with adolescents' self-efficacy. Social support received from peers also increased self-efficacy among adolescents from low socio-economic backgrounds (Sheikh et al., 2022). Demographic variations in self-efficacy levels among adolescents within varying context presents an empirical gap that called for a study to be done within low income countries like Uganda.

2.5 Academic Engagement Levels and Demographic Characteristics of Adolescent Students in Secondary Schools in Kabale district, Southwestern Uganda

Considerable research has been conducted on demographic variations in academic engagement levels in diverse contexts and disparities in findings have been advanced. For instance, in a study by Musa et al. (2016) among Nigerian adolescents indicated that while academic engagement levels declined as progressed in education, there were no significant differences in gender and academic engagement. Findings in the study conducted by (Amir et al., 2014)

among Malaysian students similarly had higher engagement levels than older adolescents. On the contrary, students in Malaysia were different from Nigerians in terms of gender variation in academic engagement whereby females in the former were more engaged in academics than their male counterparts.

A study conducted by (Yu, 2021) within four state secondary schools in England found that boys were more academically engaged than boys. Though past research conducted by Fredricks et al. (2019) among American students revealed that whereas there was no gender variation in academic engagement, external incentives, parents' education level, peer and parental support were associated with academic engagement whereby receiving support and the higher the education level of the parents, the more likelihood it was for their children to engage well in academics. Similarly, other research findings further stipulate that highly educated parents are more involved in their children's learning dynamics hence good education outcome (Naite, 2021).

Similarly, another study conducted among high school students found out that parental involvement, and peer support increased student academic engagement (Robtoy, 2017). A meta-analysis of 42 studies conducted between 2003 to 2021 further indicated that adolescents from high socioeconomic backgrounds made better use of parental involvement and were able to experience positive education outcomes (Şengönül, 2022).

On the contrary, a study conducted among Turkish University students indicated that students' parents from low socio-economic status backgrounds were more involved in their children's academic work which consequently promoted greater academic engagement than their counterparts from high

income backgrounds (Horanicova et al., 2022). Literature review present empirical gaps which confirmed that demographic variation in academic engagement calls for a context specific study to provide a foundation for interventions geared towards academic engagement enhancement among adolescent students in financially constrained communities like Uganda.

2. 6.0 The Relationship between Achievement Goal Orientation and Self-Efficacy

In order to fulfill the conditions for running regression analysis for the mediation effect of self-efficacy on the relationship between achievement goal orientation and academic engagement, it was important to understand whether there is a statistically significant association between independent variables and the dependent variable.

Numerous studies have explored the relationship between achievement goal orientation and self-efficacy levels. For instance, a study conducted among university students in the United States indicated that students who adopted positive goal orientations (mastery and performance approach) demonstrated unwavering confidence in persistent learning even when faced with difficulty (Alhadabi & Karpinski, 2020). The same study results further indicated students driven by avoidance goals often grappled with lower academic achievements. Similarly, a study done among Chinese college students revealed that achievement goals, whether oriented towards approach or avoidance, were associated with self-efficacy and approach goals were linked to high self-efficacy levels (Zhou & Kam, 2017).

On the contrary, study by Ghaleb et al. (2015) among university students in Hashemite University in Jordan specified that mastery approach achievement

goals were positively correlated with high self-efficacy while performance goal orientation (approach and avoidance) was negatively associated with self-efficacy. The study suggested that students who adopt mastery goals have the confidence to engage academically while those who adopt performance goals may have less confidence engaging in academic tasks that they deem difficult.

The contradictions in study findings provide a diverse perception on how the adoption of achievement goal orientation types may be associated with self-efficacy differently within the western context. While the aforementioned studies highlight the pivotal role of self-efficacy in fostering positive goal orientations and mitigating the impact of avoidance goals, its focus is limited to academic performance while neglecting the crucial aspect of academic engagement. The results are limited in scope and this prompted the current study to establish the relationship between self-efficacy and academic engagement (a critical aspect of learning) in Uganda.

2.6.1 The Relationship between Self-Efficacy and Adolescent Students'

Academic Engagement

Education researchers have studied self-efficacy beliefs and its effect on academic engagement. One meta-analysis done on 26 studies about self-efficacy and academic engagement in elementary, secondary, and college students indicated a favourable relationship (Chang & Chien, 2015). It has also been suggested that a person belief in successful completion of an academic activity enhances their academic effort and commitment to higher academic objectives (Cheng, 2020). Academic confidence and optimism are essential to involvement. A related study revealed that if a student lacked confidence in their academic abilities, they would lose interest in school and quit (Heo et al., 2021).

In a study of 407 Turkish adolescents, self-efficacy views predicted all aspects of academic engagement (Sökmen, 2021). These results show that self-efficacy is a critical predictor of academic engagement meaning that its enhancement may result in tremendous positive change in academic engagement hence desirable education outcomes within the western context.

Some studies that have attempted to examine the link between self-efficacy and learning within the context of developing countries, have mainly focused on academic performance neglecting academic engagement. For example, a study conducted among orphaned secondary school students in Kenya indicated that self-efficacy was associated with academic performance, (Muiga, 2019).

The study's emphasis on academic performance leaves a gap in understanding how self-efficacy may influence student engagement. Despite the studies that have been done regarding self-efficacy and academic outcome, the adolescent population in Uganda is underrepresented and antecedents of academic engagement are scarcely examined. Being a low-socioeconomic status country, adolescents growing up in Uganda are exposed to poverty related adverse experiences that may affect their self-efficacy and academic engagement. Considering the significance of self-efficacy as portrayed in studies reviewed, the dearth of information concerning self-efficacy and academic engagement among adolescent students in secondary schools in Southwestern Uganda is a research gap that calls for this current study.

2.6.2 The Relationship between Achievement goal orientation and Academic Engagement

A considerable number of studies investigating achievement goal orientation and academic engagement at different education levels have been done. For example, a study conducted in Turkey among students in Higher Institutions of Education (HEIs) found that achievement goal orientation predicted both surface and deep learning (Soyer & Kirikkanat, 2019). Specifically, approach goals were associated with deep learning while performance avoidance goals were associated with surface learning. Related study findings advanced by Lin revealed that approach goal orientations were positively related with deep learning among International English second language learners in the United States of America (Lin, 2019).

Similarly, Yeh and colleagues in their study on AGO and supportive online learning behaviors among undergraduate and graduate students in Texas, found out that achievement goal orientation had a direct pivotal impact on expected learning outcome (Yeh et al., 2019). Moreover, one of the studies conducted among university students in the USA, found out that MAP goal orientation was positively associated with student academic performance (Alhadabi & Karpinski, 2020). These findings illuminate that achievement goal orientation influence academic engagement within western context especially in higher institutions of education. Since the studies were conducted at tertiary institutions in developed countries, it is not clear whether similar findings are true of the Ugandan education system.

In an East African context, a study conducted among 385 Kenyan adolescent students in 10 public secondary schools found significant correlation

between approach goal orientations and academic achievement (Ireru et al., 2021). Another study conducted among form three adolescent students in Kenya in twelve secondary schools revealed a significant relationship between achievement goal orientation and academic achievement (Ng'ang'a, 2018). The same study categorised adolescents according to their achievement goal orientation dimension and found out that majority 67.5% (630) adolescents adopted mastery approach goal orientation 15% (630) adopted performance avoidance, 12.5% (630) adopted performance approach goal orientation and only 2.5 % (630) adopted mastery avoidance achievement goal orientation. Studies that were conducted in the context of one of the developing countries focused on academic performance negating academic engagement hence a gap in scope which motivated this study.

Achievement Goal Orientation and Self-Efficacy Differently Predict Academic Engagement

Academic engagement (i.e., behavioral, emotional, cognitive and agentic) is critical for promoting efficient learning and academic success. Among the antecedents of academic engagement, achievement goal orientation and self-efficacy have received enormous research especially in the context of the Western educated industrialized rich and democratic societies (Salmela-aro et al., 2021). Salmela-aro and colleagues conducted a meta-analysis of 104 studies covering a wide spectrum of antecedents of academic engagement in almost all continents apart from Africa. The underrepresentation of the African population presents a gap in scope that motivated the current study. The effect of achievement goal orientation and self-efficacy on academic engagement is a complex but an important relationship and studies examining this relationship

have found varying results. For example, a study conducted among first year Turkish University students found out that adoption of mastery approach goals and high self-efficacy resulted in academic success due to persistent interest despite the difficulties and obstacles that learning presents (Sekreter, 2019).

Similarly, a study conducted among college English language learners indicated that mastery goal orientation was strongly associated with high self-efficacy whereas performance avoidance goals were negatively associated self-efficacy (Shi, 2021). Similar to the previous research findings, a longitudinal study conducted among French Canadian adolescent students indicated that mastery goals predicted both high cognitive and behavioral engagement while performance avoidance goals had an indirect effect on cognitive engagement through the mediating role of seeking help from teachers (Duchesne et al., 2019).

On the contrary, a study conducted among Chinese university students advanced that it is through academic engagement enhancement that students' academic self-efficacy levels are improved and consequently high academic performance (Meng & Zhang, 2023). In this study, the authors suggested that enhancement of academic self-efficacy and academic engagement results in high academic performance. The inconsistencies in the existing study findings necessitated a study to be done in Uganda since the participants polity, social economic status and the learning environment are predominantly different. The findings of the aforementioned studies portrayed a lack of geographical, population and content scope, and focus was mainly on academic performance as the outcome but not academic engagement. It is also currently not known whether achievement goal orientation types and self-efficacy differently

influence students' academic engagement. This current study focused on academic engagement as the outcome variable looking at which of the independent variables (achievement goal orientation and self-efficacy) addition best predicts it.

2.6.3 Mediation Effect of Self-Efficacy on the Relationship between Achievement Goal Orientation and Academic Engagement

To the researchers' knowledge, only a few studies have investigated the role of self-efficacy as a mediating variable on the relationships between various predictor variables that enhance learning outcomes. A study conducted among Filipino high school adolescents found that achievement goal orientation and self-efficacy had statistically significant impact on students writing performance (Castillo et al., 2020). Alhadabi and Karpinski (2020) maintain that self-efficacy beliefs (SE) played a mediating role on achievement goal orientation and students' academic performance. Particularly, SE positively impacted mastery and performance-approach goals and played a protective role by reducing the negative impact of avoidance goals on academic performance interpreted as Grade Point Average (GPA). Another study done among Malaysian students in e-learning environment revealed that self-efficacy played a fundamental role in mediating time management and students' performance (Osman, 2018).

However, there is scanty literature on studies that explored academic self-efficacy as a potential mediator between diverse predictor variables and academic engagement mainly in the western contexts. For instance, Zhen et al. (2021) found that academic self-efficacy mediated the relationship between gratitude and academic engagement in Chinese middle school students.

Chen et al. (2021) identified the mediating role of academic self-efficacy in the relationship between proactive personality and academic engagement, indicating an indirect effect of proactive personality on students' academic engagement through academic self-efficacy. Aldrup et al. (2018) observed that academic self-efficacy mediated the relationship between AGO and academic engagement among German college students. Similarly, Zhang et al. (2022) showed that academic self-efficacy significantly mediated the relationship between approach AGO (mastery and performance) and academic engagement in Chinese undergraduate students. Honicke et al. (2020) revealed that academic self-efficacy mediated the relationship between approach achievement goals and academic achievement, with a more pronounced effect for mastery approach goals compared to performance approach goals.

Findings from previous research stipulate that the stronger the belief an individual has in the ability to successfully achieve an academic task, the more the likelihood of effective academic engagement and consequently higher academic performance. Beliefs indirectly or directly determine how much effort an individual will put into academic tasks and how long they will persist in the face of challenges. High self-efficacy can create a self-fulfilling prophecy, in which a person believes that they are effective, in control, and have the capacity to successfully engage in an academic activity.

In addition to the aforementioned studies which investigated the mediation role of self-efficacy as a potential mediator resonate with findings advanced by Chen and colleagues who found that self-efficacy significantly mediated the relationship between proactive personality and student academic engagement among adolescents (Chen et al., 2021). Similarly, Liu et al. (2022)

advanced that among Chinese college students, self-efficacy and mastery goals played a significant mediation role between teacher support and learning engagement. Among Taiwan teacher education students, self-efficacy played a crucial mediation role between self-perceptions and self-learning (Liu, 2015). Alhadabi and Karpinski (2020) Also maintain that self-efficacy beliefs (SE) played a supportive role in achievement goal orientation and students' academic performance. Particularly, SE positively affected the influence of mastery and performance-approach goals on academic achievement interpreted as Grade Point Average (GPA). Another study done among Malaysian students in an e-learning environment revealed that self-efficacy played a fundamental role in mediating time management and students' performance (Osman, 2018).

The literature search of this study resonates with assumption advanced in Social Cognitive Theory on the notion that individuals have the capacity to set goals for themselves, monitor their progress, and adjust their behavior accordingly (Nabavi, 2014). However, human behavior is shaped not only by cognitive processes and personal characteristics but also by environmental factors and these interact and influence each other in complex ways. This calls for an investigation in a context whose environmental characteristics may differ from those within developed countries where the theory hinges its assumptions.

A study done by Alhadabi and others found that avoidance goals negatively correlated with students' academic performance and when self-efficacy was introduced to the model, the effect of avoidance goals became non-significant implying that self-efficacy enhancement is one of the major channels through which academic performance can be increased (Alhadabi & Karpinski, 2020). Moreover, a study by Zhang et al. (2022) among Chinese revealed that

performance avoidance goals were positively associated with academic performance. The literature in different contexts within HIC resonate with the theoretical perspective that self-efficacy plays a critical role in shaping individuals' behavior and motivation (Bandura, 1996).

It is noted that literature regarding the interaction effect of self-efficacy on the variables investigated within high income countries mainly focused on academic performance and achievement as the outcome variable with only a few examining the direct relationship between achievement goal orientation and academic engagement (Salmela-aro et al., 2021). No studies were identified that examined the mediation effect of self-efficacy on the relationship between achievement goal orientation and adolescent students' academic engagement. Within the low resource education contexts like Uganda, it is currently unknown whether self-efficacy explains the relationship between achievement goal orientation and academic engagement among adolescent students. This study therefore predicted that there would be a statistically significant mediation effect of self-efficacy on the relationship between achievement goal orientation and academic engagement among adolescent students in Kabale district, Southwestern Uganda.

2.7 Factors that Influence Variation in Academic Engagement among Adolescent Students

As a vital predictor of effective learning, academic engagement research pertaining its predictors and variations has been done has gained considerable attention from researchers (mostly in the western context) as an essential component for education success (Abubakr, 2018; Duchesne et al., 2019). Academic engagement or disengagement can be interpreted either as a process

or an outcome that requires a conducive learning environment provided by teachers, peers and parents (Delfino, 2019).

Regarding variation in academic engagement within specific contexts, a study conducted among French Canadian adolescent students revealed teacher-student interaction as one of the critical factors (Duchesne et al., 2019). A similar study conducted among high school adolescent in the United States of America (USA) revealed that parental involvement, and peer support influenced academic engagement in the study sample (Robtoy, 2017). Related to the aforementioned study findings, a mixed method study done among American adolescents revealed that teacher support, peer support, autonomy, classroom and school structure were very important predictors of academic engagement variations (Fredricks et al., 2019). Specifically, in a classroom environment where teachers gave positive feedback, students developed a better perception of competence and worked hard to accomplish their academic goals. Close to the findings advanced by studies conducted among USA adolescents among low-income high school students in England, variations in academic engagement were influenced by active involvement into learning activities, supportive classroom and family environment among others (Devito, 2016)

A systematic review of literature conducted by Malaysian researchers revealed that both parents, school and peers were agents of high engagement in learning and had great influence on how adolescents perceive competence (Ali & Hassan, 2018). The literature review of this study reveal overlapping context-specific actors that influence variations in achievement goal orientation and academic engagement among students mainly in the western contexts. The previous study findings present a dearth of research in the context of developing

countries like Uganda. Understanding the dynamics of adolescent students' achievement goal orientation and engagement is critical because it provides vital information for interventional research that promote effective learning. Moreover, high academic engagement levels have been associated with high levels of academic achievement, low levels of student boredom, disaffection, and dropout rates (Glaphathi et al., 2019; ONG, 2018; Qudsyi et al., 2020; Suhag et al., 2019).

In fact, enhancing academic engagement minimises problematic adolescent behaviors, such as substance use and depressive symptoms which would compromise successful learning (Zhao et al., 2021). Therefore, examining factors that influence academic engagement in the context of developing countries like Uganda is critical. In addition to achievement goal orientation and self-efficacy, this study explored other context-based factors that could influence academic engagement among adolescent students within a low-income education context.

2.7 Summary of Research Gaps

This literature review revealed several key findings and research gaps in the relationship between achievement goal orientation, self-efficacy, and academic engagement. Studies conducted in the United States and China indicate a diverse perception of how approach goal orientations (mastery and performance) are associated with unwavering confidence and persistent learning, while avoidance goals are linked to lower self-efficacy and consequently academic achievements. However, contradictions in findings across studies in different contexts suggest a need for a complex understanding of how achievement goal orientation types are associated with self-efficacy.

Additionally, the review highlights a research gap regarding the limited focus on academic engagement, as opposed to performance, in the context of developing countries. Moreover, a meta-analysis literature review of 104 global studies done on academic engagement among adolescents did not include any study from the African context where Uganda belongs (Salmela-aro et al., 2021).

The Uganda population is underrepresented, thus a critical gap in understanding how self-efficacy and other context-specific factors influences adolescent academic engagement in low socio-economic settings. Furthermore, the literature underscores the need for exploration into the interplay between achievement goal orientation, self-efficacy, and academic engagement, especially in the underrepresented regions (low social economic status countries like Uganda).

This literature review also emphasizes the scarcity of studies examining the mediation effect of self-efficacy on the relationship between achievement goal orientation and academic engagement, particularly in developing countries like Uganda. Variation in achievement goal orientation adoption and academic engagement are recognized, with existing studies primarily focused on Western contexts, leaving a gap in understanding these dynamics in developing countries.

Notably, despite the dedication, time and recourses put by NGOs like Compassion International to support children in education, it's still unclear whether they actually demonstrate benefits for education of the beneficiaries. Overall, the literature review in this study called for research to address these gaps and provide a more comprehensive understanding of the complex

relationships among achievement goal orientation, self-efficacy, and academic engagement, particularly in low resource educational settings.

Context-specific factors that influence achievement goal orientation adoption and academic engagement among Compassion International support beneficiaries needed to be explored in order to establish the basis for context relevant interventions to enhance academic education outcomes. Addressing the aforementioned information gaps results in understanding of how to improve academic engagement within Uganda specifically, which could have important applied benefits for educational policy development and consequently far-reaching societal benefits regarding poverty eradication. Exploring what influences variations in adolescent students' academic engagement other than achievement goal orientation and self-efficacy yielded to findings that are more contextually relevant.

2.8 Hypotheses

Based upon the literature and existing theory, the following hypotheses were tested:

1. Drawing from Self-Determination Theory (SDT), it is believed that students may adopt different achievement goal orientations (e.g., mastery approach, mastery avoidance, performance-approach, performance-avoidance) based on their perceived autonomy in learning, competence beliefs, and the quality of their relationships with, parents, teachers and peers. In addition, demographic characteristic like age, external support, school type and socio-economic status play a fundamental role in shaping achievement goal orientation endorsement. This study therefore hypothesized that, "There is a statistically

significant demographic variations in achievement goal orientation among adolescent students in Kabale District, Southwestern Uganda.”

2. In the context of Southwestern Uganda, a low socioeconomic status community, adolescent students are likely to experience challenges with mastery of taught content, negative social modelling, disruptive social persuasion, and physiological feedback within their learning environment which consequently impact their self-efficacy levels. In light with Bandura's Social Cognitive Theory, it is purported that cultural factors, access to educational resources, and the quality of interpersonal relationships may play significant roles in shaping students' self-efficacy beliefs. This study hypothesized that; There are statistically significant demographic variations in self-efficacy levels among adolescent students in Kabale District, Southwestern Uganda.
3. Exposure to adversity early in life may influence an individual's engagement in learning compared to their counterparts within enabling environments. Adolescents students in secondary schools in Kabale district, Southwestern Uganda may not sufficiently engage in academic tasks due to their poverty associated adverse experiences despite the financial support they receive to meet their basic educational needs. This study therefore hypothesised that; There are statistically significant demographic variations in academic engagement among adolescent students in Kabale District, Southwestern Uganda
4. Self-efficacy significantly mediates the relationship between achievement goal orientation and academic engagement among

adolescent students in secondary schools in Kabale District,
Southwestern Uganda

2.9 Research Question

What context-specific factors influence academic engagement among
Compassion International support beneficiaries and non-beneficiary adolescent
students in Kabale District, Southwestern Uganda?

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The purpose of this chapter is to elaborate on how the current study was conducted. The mixed methods research design in which the biggest part is quantitative with a small qualitative aspect is well explained under this chapter. The chapter deliberates on the philosophical perspectives, research paradigm, study design, the population of interest, the method of sampling, and sample size determination. The chapter further discusses data collection instruments and methods. More still, the reliability and validity of instruments, research procedure, data management, methods of data analysis, and ethical considerations are all presented. This chapter considers the design, population, sample, and sampling techniques used in the study. In addition, the data collection methods, instruments, procedures, management, and analysis methods are described.

3.1 Philosophical Perspectives

In the present study, objective ontology was followed through the application of statistical procedures and calculations, while subjective ontology was followed through the examination of respondents' narratives. Epistemology, pertaining to the understanding of knowledge acquisition and its communication to others in a user-friendly manner to elucidate reality, and is categorized into objective and subjective epistemology (Scotland, 2012). Addressing objective epistemological concerns in this research involved the utilization of quantitative methods for data collection and analysis, leading to the derivation of empirical results.

Concurrently, subjective epistemology employed qualitative methods to generate explanations and statements related to the investigated issues. The research methodology embraced a dual stance, incorporating positivism for quantitative research and interpretivism for qualitative research, thereby adopting a concurrent mixed methods paradigm (Creswell & Poth, 2018). Maintaining researcher detachment from participants ensured the collection of data reflecting their independent understanding of reality through the completion of questionnaires. Furthermore, the research adhered to axiological considerations, specifically ethical considerations throughout the entire study. Aspects such as privacy, confidentiality, and informed consent were diligently addressed in the research process.

3.2 Research Paradigm

This research was grounded in pragmatic approach. Pragmatism is about solving problems by putting what works into practice. Since there is no absolute unity in the world, the researcher employed a range of techniques for data collection and analysis instead of relying solely on one. Truth was said to be what functions at a certain moment in time. Since the study challenge was not based on a binary distinction between reality inside the mind and reality outside the mind, the researcher integrated quantitative and qualitative data since doing so allowed for the best comprehension of the situation. The researcher held that research always occurs in the context of both an external world that exists outside of the mind and one that which is logged in the mind. Pragmatists argue that the validity of an idea or theory should be determined by its practical effects and usefulness rather than relying solely on abstract principles or metaphysical considerations (Creswell, 2014).

This study employed pragmatism approach because use of both positivist and interpretivist perspectives results in capturing reality since it encompasses multiple facets that cannot be fully comprehended unless diverse interpretations are involved. Combining qualitative and quantitative methods provides a richer and more robust understanding of complex relationships among achievement goal orientation, self-efficacy, and academic engagement.

3.4 Research Approach

The study primarily utilized a quantitative research approach, while also incorporating qualitative methods, in order to combine the strengths of both and reduce the drawbacks, resulting in a better understanding of the research problem or question. Furthermore, psychological traits are better comprehended when examined from different angles (Creswell, 2014). The concurrent scheduling during the same phase gave equal priority to all methods and maintained their independence. Multiple approaches, including convergent-parallel, explanatory sequential, embedded transformative, and multiphase mixed methods, comprise the mixed methods methodology. However, this investigation is focused on convergent-parallel mixed methods approach.

Quantitative research involved the accumulation of numerical data through closed-ended questions on a five-point Likert scale in order to test research hypotheses. The qualitative aspects of research, on the other hand, utilised the explanatory design to answer the research question. This accounted for subjective opinions and explanations that were incapable of being quantified. The research included an interpretive approach due to the presence of certain elements that may necessitate the use of mixed reality, which cannot be adequately elucidated solely through quantitative findings. The selection of

the approach was informed by Creswell's (2014) assertion that qualitative and quantitative approaches provide distinct information, thereby enhancing the depth of the study.

3.5 Research Design

A cross-sectional survey research design and correlational design were used (Kaushik & Walsh, 2019). The researcher used mixed methods (QUANT-qual) design in which quantitative and qualitative data were gathered concurrently. A mixed methods research design combines both quantitative and qualitative research methods in a single study in order to gain a deeper understanding of the research topic or question. As suggested by Creswell & Poth, (2018), the employment of mixed approaches encouraged complementarities (i.e., overlapping or divergent points of view), facilitated development beyond single method findings. Using the mixed methods design in this current study provided a more comprehensive and nuanced understanding of the study variables and enhanced the overall robustness of the study.

Qualitative methods offered in-depth insights and context, capturing the richness of experiences of participants regarding factors that influence academic engagement, while quantitative methods provided statistical rigor regarding associations among the study variables. By integrating these approaches, the limitations inherent in using only one method were overcome, hence offering a more holistic view and a deeper exploration of research question. This mixed methods design was particularly valuable to provide a multifaceted understanding crucial for informing theory, policy and practice in as far as academic engagement enhancement in low socio-economic countries like Uganda is concerned.

3.6 Quantitative Study Population

The study population for the quantitative survey was derived from a population of approximately 2300 (2000 non-Compassion International support beneficiaries and 300 beneficiaries) students within two secondary schools in Kabale district, Southwestern Uganda. To ensure feasibility of the study, two secondary schools (private and public) were prioritised because they collaborate with compassion projects to enrol Compassion International support beneficiaries at subsidised school fees. The rationale for selecting Kabale district, Southwestern Uganda, particularly Compassion International support beneficiaries and non-beneficiaries was as follows:

Compassion International, a Christian child sponsorship organization for children from low socio-economic backgrounds, has been operating in Kabale district, Southwestern Uganda for the last 30 years. The study findings could provide valuable insights into the impact of their educational support programs on academic engagement and achievement goal orientation among secondary school students in the region. Southwestern Uganda is known to have a high poverty rate, which may affect the educational achievement of students. This study helped to determine how academic engagement and achievement goal orientation differ between supported and non-supported students in this region.

3.6.1 Qualitative Study Population

The qualitative study population was derived from Compassion International officers, directors of studies, class teachers and a subset of adolescents who participated in the quantitative study. The population of class teachers, directors of studies, Compassion International officers responsible for students' academic

welfare, and a subset of adolescents aimed at obtaining a comprehensive understanding of the factors influencing academic engagement among adolescent students. Class teachers and directors of studies provided valuable perspectives from an institutional and instructional standpoint, offering insights into the school environment and curriculum dynamics.

Compassion International officers brought a broader context by contributing information on external support systems and interventions. Including a subset of adolescents facilitated the incorporation of the direct experiences and viewpoints of the target population, allowing for a more holistic examination of factors affecting academic engagement. By engaging these diverse stakeholders, the research captured a well-rounded picture of the multifaceted influences on academic engagement, enabling the development of more targeted and effective intervention plans by school stakeholders and other education policy practitioners

3.6.2 Inclusion and Exclusion Criteria

The two secondary schools in Kabale District which collaborate with Compassion International to admit Compassion International support beneficiaries at subsidized school fees were included in the study. All adolescents between the ages of 12 and 21 in the selected schools within classes that have Compassion International support beneficiaries were included in the study population. Directors of studies for the two selected schools, teachers in charge of selected classes and compassion workers in charge of adolescents' education welfare were included as key informants. This study included adolescent age categories ranging from 12 to 21 years old because according to Nienstein et al. (2009) chronologic definition, adolescence refers to a

developmental period between childhood and adulthood with sub stages ranging from 12 to 24 years depending on gender (Curtis, 2015). For this study an adolescent meant a secondary school student within the age range of 12 to 21 years.

All secondary schools within Kabale district that do not collaborate with Compassion International to admit Compassion International support beneficiaries at subsidized school fees were excluded. Adolescents between the ages of 12 and 21 years that were supported by other NGOs other than Compassion International were excluded.

3.7 Quantitative Sampling Strategy

The study used multistage sampling strategy described in sections 3.7.1 to 3.7.4. The study had seven sampling units at various levels which included district, schools, classes, students, class teachers, directors of studies, compassion workers.

3.7.1 Selection of the District

Purposive sampling was used to select Kabale district from Southwestern Uganda. Kabale district was selected because there are schools which collaborate with Compassion projects to admit Compassion International support beneficiaries at a subsidized school fees cost to enable them access quality education. The selection of the district further facilitated comparison of Compassion International support beneficiaries with non-beneficiaries within the same learning environment.

3.7.2 Selection of Schools

Purposive sampling was used to select secondary schools that include Compassion International support beneficiaries in Southwestern Uganda. The

inclusion criteria rationale for selecting a secondary school was based on a school being located in Kabale district, Southwestern Uganda and collaborating with Compassion International projects to admit supported students at a reduced school fees cost to enable them access quality education. Two schools that collaborate with compassion were selected. Students within the two schools selected for data collection, supported by other organisations apart from Compassion International were excluded for homogeneity reasons because organisations do not offer uniform support.

3.7.3 Selection of Classes

While in the school, systematic random sampling was done. This was a good method for this study because it eliminated bias to ensure that the sample was reflective of the diversity present in the population within classes. By maintaining proportional representation, accurate generalizations from the sample to the entire population was ensured, which enhanced the external validity of the study. This approach was particularly useful because the population consisted of distinct subgroups with different characteristics. However, candidate classes were not included in the study because the administrators did not allow access to them since they were too busy (at the time of data collection) to engage in any other activity other than academic work.

3.7.4 Selection of Students

Systematic random sampling was used to obtain a representative number of participants from Compassion International support beneficiary and non-beneficiary adolescent students within students' classes. Using systematic random sampling was important to ensure a representative and balanced sample that accurately reflected the diversity within the larger population. Importantly,

this method allowed capturing of the variability within different categories to ensure that the overall demographic composition of the population was reflected in the sample such as gender, age and school type. Additionally, it allowed for a balanced representation of both Compassion International support beneficiaries and non-beneficiaries, recognizing the potential impact of external support on academic engagement. By employing this method, the study aimed at providing a more nuanced and accurate understanding of the factors influencing academic engagement across diverse demographic characteristics, enhancing the external validity and generalizability of the research findings.

To get a representative sample per school, the total number of students in the school was divided by the total number of all students in the two secondary schools, multiplied by total expected minimum sample of students from the school. To get the number of participants per school, a total number of adolescents in classes with Compassion International supported counterparts was divided by the total number of adolescents in the two secondary schools, multiplied by expected minimum sample from the schools.

To get number of non-compassion beneficiaries per class, the number of students that are non-Compassion International support beneficiaries in a class was divided by the total number of non-Compassion International support beneficiaries in a school, multiplied by the expected sample of non-beneficiaries in the school. To arrive at an individual participant, the number of non-beneficiaries per class was divided by the total sample of non-beneficiaries in the school and this yielded to the n^{th} position. Following every n^{th} position, participants were systematically randomly selected within the classrooms. The researcher followed the same procedure to determine the selection of

compassion beneficiary participants. All adolescents between the ages of 12 and 21 within the two schools were eligible for selection.

Table 3.1: Sample Size Table

Category	Population		Estimated sample	Total Sample	Sampling strategy
Compassion Support	Compassion International support Beneficiaries	380	188	510	Systematic random sampling
	Non- Beneficiaries	2000	322		Systematic random sampling
School Type	Private	2400	330	510	Systematic random sampling
	Government	340	180		Systematic random sampling
Gender	Males	600	231	510	Systematic random sampling
	Females	1000	279		Systematic random sampling
Class	Senior One	200	131	510	Systematic random sampling
	Senior Two	230	143		Systematic random sampling
	Senior Three	170	118		Systematic random sampling
	Senior Five	170	118		Systematic random sampling
Age	Early (12-14)	40	33	510	Systematic random sampling
	Middle (15-17)	850	262		Systematic random sampling
	Late (18-21)	500	215		Systematic random sampling

3.8 Qualitative Sample Selection

3.8.1 Selection of Directors of Studies

Purposive sampling was used to select the directors of studies within schools under study. Therefore, from the two schools under study, one director of

studies was selected from each school. Directors of studies were selected based on their expertise in students learning dynamics and the role they play in ensuring that successful learning occurs in schools.

3.8.2 Selection of Class Teachers

Purposive sampling was used to select teachers from the two schools under study. Two class teachers in charge of the class academic welfare were selected from each of the schools. A class teacher for senior one and five were selected to cater for representation of teachers in charge of the implementation of lower secondary curriculum and the usual curriculum. Therefore, each school, a total number of two teachers, making a total of four, were interviewed.

3.8.3 Selection of the Compassion International Officers

Purposive sampling was used to select compassion officers. The selection of two Compassion officers depended on whether a compassion project collaborated with the two schools under study. Two compassion officers in charge of student education welfare were selected for the interview.

3.8.4 Selection of a Subset of Adolescent Students

Purposive sampling was used to select a subset of six adolescents from the two schools under study. Two non-beneficiary adolescent students were from each school making a total of four from the two schools under study.

One Compassion International support beneficiary was chosen from each school. Therefore, from the two schools, a total number of six adolescent students were interviewed. A total number of 14 participants were interviewed for the qualitative data collection.

3.9 Sample Size

3.9.1 Quantitative Sample

Basing on Morgan's table of sample determination (Bukhari, 2021), a sample of 510 participants was obtained from a population of 2380 adolescents for quantitative data collection (see Table 3.1). A total sample of 510 adolescent students between 11 and 21 years were systematically randomly selected. This age category of adolescents was selected drawing from the chronological definition advanced by Nienstein et al. (2009) which identifies adolescence as a developmental stage that occurs between childhood and adulthood, with sub-stages ranging from 12 to 24 years of age. The specific age ranges may largely depend on gender (see, Curtis, 2015). Due to the effect of Covid-19 lockdown, most adolescents were much older than expected age categories especially senior five students, so the researchers considered 11-21 years in order to include senior five students.

3.9.2 Qualitative Sample

In order to attain the qualitative sample, 2 directors of studies, 4 class teachers, 2 compassion workers and a subset of 6 adolescents were selected for qualitative interviews. This yielded to a total of 14 qualitative interviews at the point of saturation.

3.10 Quantitative Research Instruments

The quantitative study employed a questionnaire as an instrument for data collection for adolescent students. The questionnaire was made up of four sections: demographic information, Achievement Goals Questionnaire (AGQ-R) Scale, Self-efficacy Questionnaire for children and adolescents (SEQ-C) and

School Engagement Questionnaire (SEQ). Details about quantitative research questionnaires are given below (see Section 3.9.1. -3.9.4).

3.10.1 Demographic Information

Section one of the questionnaire included demographic questions to obtain students demographic characteristics such as age, class, gender, compassion beneficiary, number of siblings, birth order, parental/guardian level of education, parents/guardians' income and parental/guardian marital status. Demographic questions run from 1-10 (see Appendix D.1). Considering students' demographic characteristics such as age, class, gender, Compassion beneficiary status, parental/guardian level of education, income, and marital status was essential as it facilitated the comprehensive analysis of factors influencing academic engagement. These variables impact students' experiences, access to resources, and support systems, potentially influencing their academic motivation and success. By examining a diverse set of demographic factors, patterns and disparities that contribute to a more nuanced understanding of the complex interplay between individual, familial, and socio-economic factors in shaping academic engagement among students were identified. Results of this study regarding the aforementioned demographic characteristics provide information crucial for tailoring interventions and policies that address the specific needs of diverse student populations.

3.10.2 Achievement Goals Questionnaire (AGQ-R) Scale

Section two of the questionnaire was made up of the Achievement Goals Questionnaire (AGQ-R) developed by Elliot and Murayama (2008) adopted by Ng'ang'a (2018). Achievement goals questionnaire is made up of 12 items used to measure four sub constructs scored on a five-point Likert scale ranging from

1 = strongly disagree to 5 = strongly agree. For example, 'My goal is to fully understand the contents taught in class'. The AGQ-R has been used in the African context and yielded good psychometric properties for example for the four subscales MAP $\alpha = 0.88$, PAV $\alpha = 0.95$, MAV $\alpha = 0.83$, and PAV $\alpha = 0.75$ in a study done among Kenyan adolescents (Ng'ang'a, 2018). For this study, a pilot study was conducted among 89 adolescent students in Kabale district, Southwestern Uganda and Cronbach Alpha Coefficient result for Achievement Goal Orientation Questionnaire sub scales MAP = $\alpha .80$, MAV = $\alpha .75$, PAP = $\alpha .85$ and PAV = $\alpha .70$. So, it was suitable for data collection among secondary school adolescents in Kabale district, Southwestern Uganda.

3.10.3 Self-efficacy Questionnaire for Children and Adolescents (SEQ-C)

The self-efficacy of adolescent students was measured using the modified Self-efficacy Questionnaire for Children and Adolescents (SEQ-C) developed by Muris in 2007. The SEQ-C contains 21 questions that assess self-efficacy in three constructs including academic, social, and emotional self-efficacy among children and adolescents (Kim et al., 2017). The three subscales, made up of 7 items each was scored on a 5-point Likert scale ranging from 1 = not well to = 5 very well. A mean score ranging from 1-2.33 was interpreted as low self-efficacy, 2.34-3.66 moderate self-efficacy and 3.67-5.0 was interpreted as self-efficacy.

The modified SEQ-C was adapted because it has been successfully used in other contexts for example among Korean secondary adolescent students with overall reliability index of $\alpha.86$ and three subscales $\alpha.83$ in academic self-efficacy, $\alpha.76$ in social self-efficacy, and $\alpha.75$ in emotional self-efficacy (Kim et al., 2017). The Cronbach's alpha for overall Self-efficacy Questionnaire for

Children and Adolescents (SEQ-C) in this study was $a = .78$; social self-efficacy $a = .70$, academic self-efficacy, $a = .78$ and emotional self-efficacy $a = .75$. Therefore, using the SEQ-C to measure adolescent students' self-efficacy in the Ugandan context was binding.

3.10.4 School Engagement Scale (SES)

The School Engagement Scale (SES) developed by Reeve in 2013 was used to measure adolescent students' academic engagement. The SES consists 21 items meant to measure middle and high school students' academic engagement embedded in four dimensions (cognitive, emotional, behavioral and agentic engagement). The four subscales are all scored on a five-point Likert scale ranging from 1 = never to very true = 5. A mean score ranging from 1-2.33 was interpreted as low academic engagement, 2.34-3.66 moderate academic engagement and 3.67-5.0 was interpreted as academic engagement.

The SES theoretically fits measurement of adolescent student engagement in this study because it embraces multiple factors embedded in academic engagement portrayed by self-determined behaviors as well as environmental aspects of an individual life (Reeve et al., 2018; Veiga, 2016; Wilcox et al., 2019). Cronbach's alpha for the Student Engagement Scale (SES) for this study was $a = .83$ (pilot results) and $.86$ (actual study results) respectively.

The pilot study conducted among adolescent students in southwestern Uganda gave a Cronbach's alpha of $a = .85$ for the Student Engagement Scale which indicates a high level of internal consistency reliability for the scale. This finding provided confidence in the scale's ability to reliably assess student

engagement, among adolescent students in Kabale district, Southwestern Uganda

3.11 Reliability of the Quantitative Study Instruments

The instrument was tested in schools that were not part of the main data collection. According to Amin (2005), testing reliability is used to assess the instrument's ability to produce consistent results when the same group of individuals is measured repeatedly under the same conditions. Cronbach's Alpha Reliability Coefficient for Likert-Type Scales test was performed to ensure the reliability of the current data, as shown in the Table 2.

Table 3.2: Reliability of the Quantitative Instruments

Variable	Cronbach Alpha Coefficient (α)	Number of Items
Mastery Approach Achievement goal orientation	.80	3
Mastery Avoidance Achievement goal orientation	.75	3
Performance Approach Achievement goal orientation	.85	3
Performance Avoidance Achievement goal orientation	.70	3
Overall Self -efficacy	.78	21
Social Self –efficacy	.70	7
Academic Self efficacy	.78	7
Emotional Self efficacy	.75	7
Student Engagement	.86	21

Results in Table 1 show Cronbach Alpha Coefficients for the achievement goal orientation questionnaire 12 items, self-efficacy with 21 items, and for school engagement with 21 items. As a result, the tool passed the reliability test, with each variable having an acceptable reliability coefficient of at least 0.70. Therefore, the instruments were suitable and reliable for data collection.

3.12 Validity of the Quantitative Research Instruments

The research instruments were validated. In a quantitative study, this is the measure of how precisely a construct is measured (Heale & Twycross, 2015). The content validity index (CVI) was established in this study after the adopted standardised questionnaires were pre-tested among adolescent students in Kabale district, Southwestern Uganda schools which were not included in the study. This was done to ensure that the questionnaires accurately described and quantified what they were supposed to measure in the context of this study especially regarding the English vocabulary which may contextually differ.

The CVI was calculated using the formula;

$$\text{CVI} = \frac{\text{Number of items rated relevant}}{\text{Total number of items in the instrument}}$$

Table 3.3: Validity Analysis

Variables	Content Validity Index	Number of relevant items	Total number of items
Achievement goal orientation	0.8	12	12
Self -efficacy	0.9	21	21
Academic engagement	0.75	21	21

Source: Survey data, 2023

The study's Content Validity Index (CVI) for achievement goal orientation, self-efficacy, and academic engagement were 0.8,0.9 and 0.75 respectively (Table 3.3). This implied that all items that were adapted to measure constructs under this study were maintained. Therefore, the instrument was deemed valid as suggested by the previous researchers (Amin, 2005). In addition, three experts and my research supervisors were consulted regarding the appropriateness and the items ability to measure what they were intended to measure in the context of adolescent students within low resource education setting. Since all questionnaires were standardised and had been proved valid in contexts similar to Uganda such as Kenya, factor loading was not considered a critical diagnostic test to do.

3.13 Validity and Reliability of Qualitative Data

Drawing from Korstjens and Moser (2018), the validity and reliability of qualitative data are ensured by evaluating credibility, dependability, conformability, and transferability. Credibility, which is linked to truth value, was established through prolonged engagement with participants, who were

encouraged to provide concrete examples to support their claims. Additionally, triangulation was employed, and multiple data collection methods were used, with research assistants participating in conducting in-depth interviews. To ensure dependability, pilot testing was conducted to assess the reliability of items, which were then refined or replaced as necessary to align with the study's conceptual and theoretical frameworks.

Initially, the in-depth interview guide included questions resulting in a deep sharing about factors influencing independent variables and the dependent variable which was academic engagement. However, the first interview revealed that students tended to mix up factors that influenced their achievement goal orientation preferences, self-efficacy and their academic engagement making it challenging for the researcher to focus on the problem variable (academic engagement).

Given the variations in what influences study variables, the researcher, informed by the literature, decided to focus on academic engagement, the problem variable (Meng & Zhang, 2023; Duchesne et al., 2019). To ensure confirmability, the study's procedures were transparently documented from the outset, creating an audit trail. Transferability was achieved by collecting rich, detailed, and contextually relevant data, which was further enhanced by providing thorough descriptions of the data and respondents' experiences.

3.14 Key Informant Interview Guide for Qualitative Part of the Study

A key informant interview guide was administered to two Compassion International officers, four class teachers and two directors of studies and six adolescent students to gather in-depth qualitative information concerning what influences achievement goal orientation dimensions adoption and academic

engagement variations among adolescent students in secondary schools. Key informants were selected based on their expertise, unique perspectives, and ability to provide rich and valuable insights that contributed to the research findings.

An interview guide for adolescents as key informants was also made. A subset of six adolescents was interviewed and was selected from those who had participated in the quantitative study. Adolescents were interviewed as key informants because they have direct experience with achievement goal orientation adoption and their academic engagement dynamics. The objective of the qualitative aspect of this study was to examine and contrast the opinions expressed by students and nonstudents, who have very different but complimentary responsibilities in academic engagement.

3.15 Trustworthiness of the In-depth Interview Guide

Trustworthiness and reliability of the in-depth interview guides for a subset of adolescents and key informants' interview guide ensured to attain high-quality data that could be used to make informed decisions or recommendations. Before the actual interviews were conducted, a pilot testing the interview guides with a small sample of participants was done to identify potential issues or challenges. Pilot testing helped in refining the questions and prompts to ensure they were clear, understandable and meaningful to the participants. Interviewers were trained to ensure that the interview guides were administered consistently and that the questions were asked in a neutral and non-leading way. All participants were asked the same questions, in the same order, and in the same way to avoid variability in responses. The trustworthiness and reliability of the qualitative aspect of this study is well explained in the data management section.

3.16 Operationalisation of Variables

The study variables were Achievement Goal Orientation, Self-efficacy and Academic engagement. According to the study, they were operationalised as in the table 3.4.

Table 3.4: Operationalization of Variables

Variable	Nature of variable	Constructs	Source and reliability	Definition
Achievement Goal Orientation	Independent variable	MAP MAV PAP PAV	(Harackiewicz & Elliot, 1993). MAP $\alpha = 0.88$, PAV $\alpha = 0.95$, MAV $\alpha = 0.83$, & PAV $\alpha = 0.75$	The drive behind adolescent students' motivation to approach engagement in academic tasks
Self-Efficacy	Mediating variable	SSE ESS ASS	(Muris, 2007) $\alpha = .86$	An individual's belief in themselves as possessing the capacity to successfully engage in academic tasks
Academic Engagement	Dependent variable	BE EE CE AE	(Fredricks et al., 2004; Reeve, 2013) $\alpha = .85$	Students' effort, commitment and active participation in academic related activities directed towards achievement of their academic goals

Source: Literature (Fredricks et al., 2004; Harackiewicz & Elliot, 1993; Muris, 2007; Reeve, 2013).

BE=Behavioral Engagement, EE=Emotional Engagement, CE= Cognitive Engagement, AE=agentic Engagement, SSE= Social Self -Efficacy, ESE= Emotional Self-Efficacy, ASE= Academic Self=efficacy, MAP= Mastery Approach Achievement Goal Orientation, MAV= Mastery Avoidance Achievement Goal Orientation, PAP= Performance Approach Achievement Goal Orientation, PAV= Performance Avoidance Achievement Goal Orientation.

3.17. Data Management

3.17.1 Quantitative Data Management

The data collected were managed through two processes, namely data screening and carrying out diagnostic tests.

3.17.2 Data Screening

This involved crosschecking questionnaires, identification of and management of missing data and outliers. Cross-checking questionnaires for errors were done, and ten of those which either had a lot of omissions or were not filled adequately were left out because they could affect the final results. Therefore, out of the 520 filled questionnaires, 510 fully filled ones were considered for data analysis. The data was then entered into the Statistical Package for Social Scientists (SPSS) with a Process Macro plugin by Hayes version 4.2. Missing data in the study were observed at an item level. Missing data analysis was carried out to evaluate the number of missing values using frequencies.

Outlier Analysis

It was imperative to ascertain whether an observation is an authentic constituent of the study sample or an extraneous element originating from an alternate source. This study identified outliers as data points that exhibited significant deviation from the overall distribution of values within a specific column of a table. Consequently, the examination and management of outliers offer compelling perspectives on the data being analysed, thereby bolstering the researcher's confidence in the conclusions derived from the dataset.

However, instead of removing these outliers, additional tests (as described in chapter four) were conducted to check whether regression analysis for mediation was appropriate.

3.17.3 Qualitative Data Management

The researcher designated a secure, centralized location with a lock and key for storing the data. The senior researcher and research assistants would convene every evening to discuss their day's experiences. Daily inspections were conducted to ensure the data was comprehensive. To avoid forgetting important concepts, the qualitative data was always transcribed a short time after it was gathered.

3.18 Data Collection Procedure

Permission was sought from the directorate of graduate research and training of Kyambogo University before the start of the data collection exercise. A letter of reference was obtained from the directorate of research and graduate training at Kyambogo University to introduce the researcher to the institutional research review boards. Data collection permits were obtained from Mbarara University of Science and Technology Research Ethics Committee (MUST-REC) and the Uganda National Council for Science and Technology (UNCST) who granted us ethical clearance (refs: SS1562ES and MUST-2022-620) respectively.

An introductory letter to schools' administrators was obtained from the inspector of schools Kabale district. A pre-visit was made to identify the necessary requirements, outstanding problems, and procedures necessary for accessing the population of study. To obtain the sampling frames, the researcher was introduced to and sought permission from the school administrators with records of adolescent students in secondary schools suitable for the study. Information including names of classroom teachers for classes where individual participants were selected was obtained. A verbal explanation about the aim of the study was given to the school administrators who then assented on behalf of

students below eighteen. Adolescent students (eighteen years and above) were asked to sign an informed consent form as confirmation of their willingness to voluntarily participate in the study. Following the directions from school administrators, classes were visited for individual participant sampling. Quantitative data was then collected using self-report questionnaires administered by the researcher after participants had understood and had no queries concerning the study. Participants sat in a well-arranged classroom to ensure that every participant had enough space to enable them fill the questionnaire independently and the exercise lasted for 40 minutes. To collect qualitative data, appointments were first established with the selected key informants one by one to set the meeting dates.

3.19 Data Analysis

3.19.1 Quantitative Data Analysis

Step 1 of data analysis and presentation was focused on quantitative data findings. After collecting the quantitative data, the questionnaires were cross-checked for inconsistencies and incomplete ones were eliminated from entry and analysis. The data was then coded according to the sections of the instrument, constructs of the sections, item by item after which it was entered into the Statistical Package for Social Scientists (SPSS) version 20.

Descriptive statistics were used to illustrate data regarding the demographic features of the sample, and regression analyses were performed in SPSS version 20 with PROCESS macro for SPSS. Process Macro for SPSS is one of the more recent advancements in mediation analysis that employs Bias-Corrected bootstrap Confidence Intervals (Tsaousis, 2022).

Data screening and diagnostic checks included normality tests (Kolmogorov-Smirnov and Shapiro-Wilk tests, Skewness, Kurtosis, and a P-P scatter plot), linearity (Skewness and Kurtosis), collinearity and multicollinearity tests (see Tables 4.14, 4.15, 4.16, and Figures 4.1, 4.2, 4.3). Pearson product moment correlations were also conducted to ensure that there were significant correlations between the study variables as it is an essential condition for regression analysis to be done (see Tables 4.17, 4.18, and 4.19). Pearson product moment These diagnostic checks were done to ensure models are stable and can fully converge (Field et al., 2012). Findings were then presented according to objectives. Results of diagnostic checks indicated that the data satisfied conditions for multiple linear regression analysis using PROCESS macro by Hayes for SPSS (Hayes & Rockwood, 2020). Skewness and kurtosis results indicated that variables were neither skewed nor kurtotic. The P-P graphs showed that there were no significant outliers. The independent variables were not highly correlated with each other and non-normality of residuals results were normal according to normal probability plots presented in the results section (preliminary tests for mediation analysis).

To achieve objective one (to assess demographic variations in achievement goal orientation adopted by adolescent students in Kabale district, Southwestern Uganda), two (to investigate demographic variations in self-efficacy levels among adolescent students in Southwestern Uganda) and three (to Analyse demographic variations in academic engagement levels among adolescent students in Southwestern Uganda), cross tabulation computing numbers and percentages, Kruskal Wallis and Mann-Whitney U tests were conducted in SPSS version 20 to investigate the influence of demographic

characteristics across study variable levels. To achieve objectives four (to analyse the mediation effect of self-efficacy on the relationship between achievement goal orientation and academic engagement) and hypotheses 4, a regression analysis was conducted. Using PROCESS macro developed for SPSS by Hayes and Rockwood (2020) the mediation effect of self-efficacy in the association between achievement goal orientation and academic engagement was examined.

The analysis was performed based on 5,000 bootstrap samples to estimate the confidence intervals for the indirect effect. The use of bootstrapping helps address potential bias and provides more reliable estimates. The model was used because the relationships between variables were linear and the data met the multivariate normality assumption. Prior to the regression analysis, standard checks were conducted, including assessing multicollinearity that the appropriate analysis was done. These methodological considerations contributed to the rigor of the analysis, enhancing the credibility and generalizability of the study findings.

3.19.2 Qualitative Data Analysis

To achieve objective five (to explore context-based factors influencing academic engagement levels among adolescent students in Kabale district, Southwestern Uganda) in depth interviews were conducted. Qualitative data was collected through interviews, which were subsequently cleaned and edited. Preliminary analysis commenced during data collection through note-taking and reflections to establish saturation. Utilizing Braun and Clarke's (2006) six procedures for thematic analysis, manual analysis, in contrast to modern software, was chosen due to familiarity and skills, allowing familiarization with

the data (Maguire & Delahunt, 2017). Although time-consuming, manual data display on result sheets fostered a deep understanding, starting with listening to audio recordings and transcribing notes personally. All audio recordings were transcribed without preliminary editing to deeply engage with the data. Iterative revisions involved multiple readings and noting emerging insights. Scripts with noteworthy points received special codes for tracking. Markers and highlighters aided in emphasizing key points for easy reference.

Thematic points were developed through inductive open coding, creating a preliminary coding scheme. The actual coding process built upon this scheme while remaining open to new emerging codes. The researcher systematically went through all transcripts, highlighting relevant phrases and sentences corresponding to the codes. As coding progressed, existing codes were modified, collapsed, discarded, or merged to make sense. Manual coding was performed using hard copies of transcripts and writing instruments. After coding, clustered texts were analysed to identify patterns and generate themes.

Themes were constructed iteratively by grouping codes into typologies aligned with the research question and theoretical lens (Maguire & Delahunt, 2017). Main themes were reviewed, adjusted, and paraphrased to ensure coherence. Referential adequacy was tested by comparing themes to raw data. Themes were defined, named, listed, and evaluated for their relationships within a thematic network, forming a coherent and persuasive narrative. Verbatim quotations were incorporated to give voice to the data.

The justification for manual thematic analysis was to allow for a deeper, more nuanced understanding of the data, as the researcher engaged with the text on a more intimate level. Manual thematic analysis allowed the researcher to

exercise her own judgment, creativity, and intuition in the coding and theme-building process which lead to the identification of novel themes (such external support offered by Compassion International) which would not have been detected by automated application. Manual thematic analysis as a step-by-step process was more transparent and easier to audit than automated techniques This transparency can enhance the credibility and trustworthiness of the research findings.

The development of key themes was grounded both in the existing literature and the actual investigation which resulted in context-based factors that influence academic engagement among adolescent students in Kabale district, Southwestern Uganda. The Social Cognitive Theory (explained in chapter two of this study) underpins the inclusion of lived experiences as one of the critical approaches to generating knowledge about academic engagement dynamics which may not be fully captured by quantitative measures in isolation.

3.20 Ethical Consideration

The researcher sought ethical approval from ethical review committee of Mbarara University of Science and Technology (MUST-2022-620) and the Uganda National Council for Science and Technology (SS1562ES) because the study involved human subjects who needed to be protected. The inspector of schools of Kabale district provided an introductory letter to enable the researcher to access the schools through administrators. Respondents who were 18 years of age or older at the time of data collection were given a formal consent form to sign as evidence of their willingness to participate in the study. Underage respondents signed an assent form and school administrators consented on their behalf as caregivers during school time since they were

boarding students. Participants were given the assurance of secrecy and the freedom to skip some questions or to withdraw from the study without facing any consequences if they found the procedure or the questions themselves to be uncomfortable.

All participant data was kept anonymous (codes were used to instead of participants' personal characteristics for identification) and secret; only the researcher, the supervisors had access to it. To ensure confidentiality, interviews were carried out in a secure environment with minimum interruption. After the participants had fully consented to be interviewed while recording their voices, the researcher engaged them in the discussion or interview while recording using a digital recorder. Some notes were also taken in order to have a record of other expressions that would not be captured verbally.

CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter presents the results obtained and analysed according to the study objectives. Section one presents findings from cross tabulation analysis, Kruskal Wallis and Mann-Whitney U test results addressing a description of the study variable levels (achievement goal orientation, self-efficacy and academic engagement) across participants' demographic characteristic to achieve objectives 1, 2 and 3. The demographic characteristics are presented according to the categories of age, gender, Compassion International support beneficiary, school type, class, parental/guardian marital status, parental/guardian education level and parental income. Section two presents findings aligned according to hypotheses 4, which guided the mediation analysis as they emerged from the study objective 4. Section three presents findings as they emerged from the research questions as guided by objective five of the study.

4.1. Demographic Variations in Achievement Goal Orientation Levels

This section describes the levels of the overall and different achievement goal orientation dimensions vis-a-vis participant demographic characteristics.

Table 4.1: Mastery Approach Achievement Goal Orientation and Demographic Characteristics of Participants

		Kruskal Wallis Test															
Demographic Characteristics		Mastery Approach Achievement Goal Orientation												Total			
		Low				Moderate				High							
		n (%)	M R	X ²	P	n (%)	M R	X ²	P	n (%)	M R	X ²	p			n	M R
Age Categories	Early (12-14 years)	4(12.1)	16.25	.899	.638	10(30.3)	57.25	.346	.841	19(57.6)	178.34	.817	.665	33	225.97	1.455	.483
	Middle (15-17)	20(7.6)	22.20			57(21.8)	61.32			185(70.6)	171.58			262	257.38		
	Late (18-21)	17(7.9)	20.71			51(23.7)	57.91			147(68.4)	181.26			215	257.74		
Participants Class	Senior One	11(8.4)	20.15	1.982	.576	25(19.1)	56.22	.979	.806	95(72.5)	181.84	2.366	.500	131	267.41	3.586	.310
	Senior Two	11(7.7)	19.23			32(22.4)	64.00			100(69.9)	178.30			143	260.5		
	Senior Three	8(6.8)	26.13			35(29.7)	57.63			75(63.6)	160.85			118	234.32		
	Senior Five	11(9.3)	20.00			26(22.0)	59.63			81(68.6)	180.34			118	256.97		
Parents/ Guardians' Marital Status	Married	33(8.1)	22.02	1.513	.679	97(24.0)	58.28	1.857	.603	275(67.9)	117.98	4.424	.219	405	254.38	1.611	.657
	Single	2(7.1)	13.75			7(25.0)	54.71			19(67.9)	115.50			28	238.34		
	Widowed	4(7.8)	18.38			10(19.6)	71.05			37(72.5)	190.88			51	277.35		
	Divorced	2(7.7)	16.75			4(15.4)	68.63			20(76.9)	140.78			26	248.75		
Parents/ Guardians' Education Level	No Education	7(8.5)	20.43	.740	.864	17(20.7)	49.79	4.301	.231	58(70.7)	160.76	2.944	.400	82	246.74	.851	.837
	Primary	12(8.5)	19.04			32(22.7)	57.09			97(68.8)	186.93			141	261.87		
	Secondary	16(8.8)	21.72			41(22.7)	58.63			124(68.5)	172.23			181	251.41		
	Tertiary Education	6(5.7)	23.67			28(26.4)	69.41			72(67.9)	180.03			106	260.79		
Parents/ Guardians' Income	0-100,000	2(4.8)	18.98	1.473	.1479	8(19.0)	60.80	1.993	.369	32(76.2)	171.55	1.188	.562	42	261.57	1.798	.407
	100,001 – 250,000	21(7.2)	24.08			67(22.9)	50.75			204(69.9)	179.49			292	248.47		
	250,0001 – 500,000	12(12.2)	21.39			20(20.4)	61.94			66(67.3)	186.56			98	240.14		

(Continued)

Table 4.1: Mastery Approach Achievement Goal Orientation and Demographic Characteristics of Participants (continued)

Mann-Whitney U test

Demographic Characteristics		Mastery Approach Achievement Goal Orientation												Total			
		Low				Moderate				High				n	MR	X ²	p
		n (%)	MR	U	p	n (%)	MR	U	P	n (%)	MR	U	p				
Gender	Male	20(8.7)	20.74	205.00	.893	65(28.1)	59.28	1708	.934	146(63.2)	180.68	14281.5	.445	231	244.70	29730	.127
	Female	21(7.5)	21.24			53(19.0)	59.77			205(73.5)	172.67			279	264.44		
Compassion International support	Non-beneficiary	27(8.4)	18.19	491.00	.031	86(26.7)	59.58	1369.0	.965	209(64.9)	176.62	14710	.886	322	246.23	27282	.059
	Beneficiary	14(7.4)	26.43			32(17.0)	59.28			142(75.5)	195.09			188	271.38		
School Type	Private	27(8.2)	21.81	167.00	.559	81(24.7)	56.56	1260	.156	220(67.1)	175.11	14122	.823	328	250.50	28049	.293
	Government	14(7.4)	19.43			37(20.6)	65.95			131(72.0)	177.52			182	264.67		
Total		41(8.0)				118(23.1)				351(68.8)				510			

Note. MR = Mean Rank, Low level = 1- 1.33, Moderate = 2.34-3.66, High = 3.67-5.0, the values in bold indicate significant effect of demographics on MAP

The results in Table 4.1 indicate that there was a statistically significant effect of receiving Compassion International support ($U = 491.00$, $p = .031$) on mastery approach achievement goal orientation (MAP) at a low level in which the beneficiaries had a higher mean rank (MR = 26.43) than non-beneficiaries (MR = 18.19). This implies that at low levels, Compassion International support significantly influences MAP with the beneficiaries adopting higher levels of MAP than non-beneficiaries. However, there was no statistically significant difference in MAP between the participants in the rest of the low, moderate and high levels as well as overall demographic characteristics. These results indicate that learners adopt different levels of MAP irrespective of their differences in gender, age, class, parents/guardians' marital status, parents/ guardians' education level, and parents/guardian income levels. The differences in proportions of participants in the different levels of MAP are not statistically significant.

Table 4.2: Performance Approach Goal Orientation and Demographic Characteristics

Demographic Characteristics		Kruskal Wallis Test														Total		
		Performance Approach Achievement Goal Orientation Levels																
		Low				Moderate				High								
		n (%)	M R	X ²	p	n (%)	M R	X ²	p	n (%)	M R	X ²	p	n	M R	X ²	p	
Age Categories	Early (12-14)	6(18.2)	157.24	.875	.646	4(12.1)	73.38	1.396	.497	23(69.7)	157.24	.875	.646	33	249.76	.055	.973	
	Middle 15-17)	17(6.5)	164.65			73(27.9)	72.22			172(65.6)	164.65			262	255.90			
	Late (18-21)	16(7.6)	172.72			60(27.9)	64.79			139(64.7)	172.72			215	255.89			
Participants Class	Senior One	16(12.2)	18.06	3.957	.266	28(21.4)	74.43	.782	.854	87(67.4)	178.59	3.594	.309	131	261.94	2.705	.439	
	Senior Two	5(3.5)	16.70			39(27.3)	67.13			99(69.2)	156.51			143	259.72			
	Senior Three	10(8.5)	25.80			38(32.2)	68.24			70(59.3)	160.35			118	236.25			
	Senior Five	8(6.8)	18.69			32(27.1)	67.44			78(66.1)	175.50			118	262.48			
Parents/ Guardian's Marital Status	Married	32(7.9)	20.67	.882	.644	107(26.4)	68.08	3.014	.390	266(65.7)	169.96	1.379	.710	405	257.15	.281	.964	
	Single	3(10.7)	14.83			8(28.6)	76.56			17(60.7)	171.12			28	245.36			
	Widowed	4(7.8)	18.50			12(23.5)	59.25			35(68.7)	154.34			51	251.27			
	Divorced	0(0)				10(38.5)	84.50			16(61.5)	151.50			26	249.04			
Parent's / Guardian's Level of Education	No Education	4(4.2)	15.40	1.497	.683	32(33.7)	62.23	1.325	.723	59(62.1)	149.15	8.957	.030	95	246.18		.530	
	Primary	10(8.8)	19.06			33(28.9)	67.35			71(62.3)	190.91			114	270.79	2.211		
	Secondary	12(7.2)	21.97			43(25.7)	72.56			112(67.1)	163.86			167	251.22			
	Tertiary	13(9.8)	20.00			29(21.1)	70.63			92(69.2)	157.24			134	249.68			
Parent's/Guardian's Income	0-100,000	2(4.8)	18.65		.684	8(19.0)	69.78	.770	.680	32(76.2)	167.73	.219	.896	42	267.12	5.836	.054	
	100,001 – 250,000	21(7.2)	22.25		.761	67(22.9)	64.72			204(69.9)	161.55			292	230.92			
	250,0001 – 500,000	12(12.2)	20.50			20(20.4)	72.56			66(67.3)	167.28			98	242.01			

(continued)

Table 4.2: Performance Approach Goal Orientation and Demographic Characteristics (continued)

Demographic Characteristics		Mann-Whitney U Test														Total		
		Performance Approach Achievement Goal Orientation																
		Low				Moderate				High								
		n (%)	MR	U	p	n (%)	MR	U	p	n (%)	MR	U	p	n	MR			
Gender	Male	20(8.7)	20.84	168.500	.581	65(28.1)	70.97	2213.0	.540	146(63.2)	173.34	12802	.325	231	248.63	30637	.333	
	Female	21(7.5)	18.91			53(19.0)	67.11			205(73.5)	163.18			279	261.19			
Compassion							1900.0	.633			12234						25715.0	.004
International support	Non-beneficiary	27(8.4)	20.00	145.000		86(26.7)	70.00			209(64.9)	161.29		.142	322	241.36			
	Beneficiary	14(7.4)	20.00			32(17.0)	66.74			142(75.5)	176.54			188	279.72			
School Type	Private	27(8.2)	18.36	97.500	.108	81(24.7)	68.98	2044.5	.994	220(67.1)	169.49	12690		328	249.81	27821.5	.232	
	Government	14(7.4)	24.75			37(20.6)	69.03			131(72.0)	164.22		.617	182	265.94			
Total		41(8.0)				118(23.1)				351(68.8)				510				

Note. MR= Mean Rank, Low level = 1- 1.33, Moderate = 2.34-3.66, High = 3.67-5.0, the values in bold indicate significant effect of

demographics on PAP

The results in Table 4.2 indicate that there was a statistically significant effect of parent/guardian education ($X^2 = 8.957, p = .030$) on performance approach goal orientation (PAP) whereby participants whose parents/guardians had higher mean rank of primary education (MR = 190.91) than those who had attained secondary school (MR = 163.86), tertiary (MR = 157.24) and no education (MR = 149.15). Results further indicate a statistically significant effect of parent/guardian income ($X^2 = 5.836, p = .054$) on performance approach achievement goal orientation adoption participants whose parents had the lowest monthly income (0-100,000 Uganda shillings) had a higher mean rank (MR = 267.12) than those who earned between 100,001-250,000 Uganda shillings (MR = 230.92) and 250,001 to 500,000 Uganda shillings (MR = 242.01). Results further indicate a significant effect of receiving Compassion International support ($U = 25715.0, p = .004$) on total performance approach achievement goal orientation (PAP) in which the beneficiaries had a higher mean rank (MR = 279.72) than non-beneficiaries (MR = 241.36).

Results imply that parental/guardian level of education and income, as well as Compassion International support significantly influence PAP. However, there was no statistically significant difference in PAP between the participants in the rest of the low, moderate and high levels as well as other demographic characteristics. These results indicate that learners adopt different levels of PAP irrespective of their differences in gender, age, class, and parents/guardians' marital status. The differences in proportions of participants in the different levels of PAP are not statistically significant.

Table 4.3: Mastery Avoidance Achievement Goal Orientation and Demographic Characteristics

Demographic Characteristics		Kruskal Wallis Test												Total			
		Mastery Avoidance Achievement Goal Orientation Levels															
		Low				Moderate				High							
		n (%)	M R	X ²	P	n (%)	M R	X ²	p	n (%)	M R	X ²	p	N	M R	X ²	p
Age Categories	Early (12-14 years)	9(27.3)	95.39	2.458	.293	13(39.4)	99.81	.143	.931	11(33.3)	73.59	.355	.837	33	264.50		.871
	Middle (15-17)	78(29.8)	72.29			104(39.7)	102.45			80(30.5)	82.13			262	252.58		.275
	Late (18-21)	61(28.4)	74.25			84(39.1)	99.39			70(32.6)	80.87			215	257.68		
Participants Class	Senior Oner	38(29.0)	78.09		.647	49(37.4)	103.15	1.572	.666	44(33.6)	85.70	3.403	.334	131	262.60	4.621	.202
	Senior Two	39(27.3)	67.18	1.657		50(35.0)	94.67			54(37.8)	82.69			143	266.19		
	Senior Three	39(33.1)	76.21			51(43.2)	98.31			28(23.7)	67.09			118	230.38		
	Senior Five	32(27.1)	77.08			51(43.2)	107.82			35(29.7)	83.60			118	259.78		
Parents/ Guardian's Marital Status	Married	126(31.1)	73.77	3.742	.291	155(38.3)	101.27	.183	.980	124(30.6)	81.65	1.868	.600	405	250.20	3.924	.270
	Single	4(14.3)	100.13			12(42.9)	101.42			12(42.9)	67.54			28	299.71		
	Widowed	12(23.5)	63.58			19(37.3)	96.21			20(39.2)	80.73			51	274.46		
	Divorced	6(23.1)	94.67			15(57.7)	103.93			5(19.2)	98.30			26	253.21		
Parent's / guardian's Education Level	No Education	27(32.9)	77.11	.291	.961	27(32.9)	89.13	5.047	.168	28(34.1)	69.54	2.310	.511	82	246.38	1.449	.694
	Primary	41(29.1)	71.93			53(37.6)	104.38			47(33.3)	81.98			141	259.44		
	Secondary	53(29.3)	75.44			68(37.6)	110.74			60(33.1)	84.16			181	262.88		
	Tertiary Education	27(25.5)	73.94			53(50.0)	91.18			26(24.5)	84.29			106	244.70		
Parent's /guardian's Income	0-100,000	23(29.5)	70.95		.271	26(33.3)	106.32	3.187	.203	29(37.2)	82.63		.507	78	281.26	26.306	<. 01
	100,001 – 250,000	59(26.9)	82.71	2.614		84(38.4)	88.96			76(34.7)	70.96	1.359		219	221.31		
	250,0001 – 500,000	34(27.2)	68.88			52(41.6)	99.99			39(31.2)	83.11			125	204.70		

(Continued)

Table 4.3: Mastery Avoidance Achievement Goal Orientation and Demographic Characteristics (Continued)

Demographic Characteristics		Mann-Whitney U Test												Total			
		Mastery Avoidance Achievement Goal Orientation															
		Low				Moderate				High							
		n (%)	MR	U	p	n (%)	MR	U	p	n (%)	MR	U	p	n	MR	U	p
Gender of Participants	Male	69(29.9)	75.67	2644.5	.753	92(39.8)	93.05	4283.0	.072	70(30.3)	82.08	3109.5	.793	231	253.11	31673	.738
	Female	79(28.3)	73.47			109(39.1)	107.71			91(32.6)	80.17			279	257.47		
Compassion International support	Non-beneficiary	101(31.4)	75.39	2284.5	.710	136(42.2)	97.16	3897.5	.171	85(26.4)	72.55	2512.0	.013	322	240.13	25318	.002
	Beneficiary	47(25.0)	72.60			65(34.6)	109.04			76(40.4)	90.45			188	281.83		
School Type	Private	104(31.7)	76.10	2121.5	.480	137(41.8)	99.89	4193.5	.685	87(26.5)	78.24	2969	.401	328	242.41	25379	.006
	Government	42(26.0)	70.72			64(35.4)	103.44			74(40.6)	84.33			182	279.50		
Total		148(29.0)				201(39.4)				161(31.6)				510			

Note. MR = Mean Rank, Low level = 1- 1.33, Moderate = 2.34-3.66, High = 3.67-5.0, the value in bold indicate significant effect of demographics on MAV

Results in Table 4.3 indicate a statistically significant effect of ($X^2 = 26.306, p < .01$) parental/guardian income level on overall mastery avoidance goal orientation (MAV) whereby participants of parents whose level of income was at 0-100,000 Uganda shillings (MR= 267.12) had higher mean rank (MR = 281.26) than participants of those who earned 100,001-250,000 Uganda shillings (MR = 221.31), and 250,001 to 500,000 Ugandan shillings. Results further indicate a significant effect of receiving Compassion International support ($U = 2512.0, p = .013$) on high mastery avoidance achievement goal orientation (MAV) and total MAV ($U = 25318, p = .002$) in which the beneficiaries had higher mean rank (MR = 90.45), (MR = 281.83) than non-beneficiaries (MR = 72.55, (MR = 240.13) respectively. Results further indicate that there was a statistically significant effect ($U = 25379, p = .006$) of school type on overall mastery avoidance achievement goal orientation whereby adolescent students in the government school had higher mean rank (MR = 279.50) than those in the private school (MR = 242.41).

Results imply that, parental/guardian's education and income level, Compassion International support significantly and school type influence mastery avoidance achievement goal orientation. There was also a marginally significant effect of gender on moderate mastery avoidance achievement goal orientation with females having a higher mean rank value than males. However, there was no statistically significant difference in MAV between the participants in the rest of the low, moderate and high levels as well as other demographic characteristics. These results indicate that learners adopt different levels of MAV irrespective of their differences in age, class, and parents/guardians' marital status and education level.

Table 4.4: Performance Avoidance Achievement Goal Orientation and Adolescent Students Demographic Characteristics

Demographic Characteristics		Kruskal Wallis Test												Total			
		Performance Avoidance Achievement Goal Orientation Levels															
		Low (%)				Moderate (%)				High (%)							
		n (%)	MR	X ²	P	n (%)	MR	X ²	p	n (%)	MR	X ²	p	n	MR	X ²	p
Age Categories	Early (12-14)	6(18.2)	27.50	2.409	.300	10(30.3)	87.50		.104	17(51.5)	172.47	2.268	.322	33	227.76	1.428	.490
	Middle (15-17)	19(7.3)	19.82			74(28.2)	63.49	4.520		169(64.5)	171.03			262	259.80		
	Late (18-21)	20(9.3)	24.68			53(24.7)	73.20			142(66.0)	155.77			215	254.52		
Participants Class	Senior One	10(7.6)	29.50	4.017	.260	38(29.0)	64.37	5.854	.119	83(63.4)	169.89	1.158	.763	131	256.93	2.630	.452
	Senior Two	12(8.4)	20.42			37(25.9)	67.85			94(65.7)	169.07			143	261.69		
	Senior Three	11(9.3)	19.77			38(32.2)	64.13			69(58.5)	160.19			118	237.08		
	Senior Five	12(10.2)	23.13			24(20.3)	85.81			82(69.5)	157.43			118	264.83		
Parent's/ Guardian's Marital Status	Married	34(8.4)	24.15	2.245	.523	112(27.7)	68.52	2.244	.523	259(64.0)	161.17	2.117	.548	405	252.88	4.968	.174
	Single	1(3.6)	19.50			8(28.6)	78.06			19(67.9)	181.29			28	282.38		
	Widowed	2(3.9)	27.50			14(27.5)	73.61			35(68.6)	181.00			51	282.75		
	Divorced	8(30.8)	17.44			3(11.5)	41.33			15(57.7)	162.17			26	213.88		
Parent's/ Guardian's Education Level	No Education	7(7.4)	23.38		.949	30(31.6)	66.31	4.714	.194	58(61.1)	133.21	8.963	.030	95	248.76	2.141	.544
	Primary	10(8.8)	21.53	.357		30(26.3)	72.82			74(64.9)	177.51			114	261.85		
	Secondary	11(6.6)	23.47			41(24.6)	61.57			115(68.9)	165.01			167	245.76		
	Tertiary Education	17(12.8)	24.50			36(27.1)	79.91			81(60.2)	172.44			134	268.91		
Parent's/ Guardian's Income	0-100,000	2(4.8)	23.63	1.699	.428	10(23.8)	69.81		.802	30(71.4)	158.38	2.701	.259	42	261.36	2.277	.320
	100,001 – 250,000	23(7.9)	25.07			75(25.7)	65.42	.440		194(66)	177.74			292	236.80		
	250,0001 – 500,000	12(12.2)	18.65			31(31.6)	65.48			55(56.1)	173.21			98	254.87		

(Continued)

Table 4.4: Performance Avoidance Achievement Goal Orientation and Adolescent Students Demographic Characteristics (continued)

		Mann-Whitney U Test															
		Performance Avoidance Achievement Goal Orientation Levels															
		Low				Moderate				High							
Total		n (%)	M R	U	P	n (%)	M R	U	p	n (%)	M R	U	p	n	M R	U	p
Demographic Characteristics																	
Gender of Participants	Male	24(10.4)	25.33	196.00	.177	71(30.7)	73.37	2032.5	.165	136(58.9)	167.47	12651	.162	231	244.77	29745.	.131
	Female	21(7.5)	20.33			66(23.7)	64.30			192(68.8)	162.39			279	264.39		
Compassion International support	Non-beneficiary	26(8.1)	19.88	166.00	.049	95(29.5)	69.44	1953	.841	201(62.4)	162.88	12438	.688	322	250.65	28706	.326
	Beneficiary	19(10.1)	27.26			42(22.3)	68.01			127(67.6)	167.06			188	263.81		
School Type	Private	29(8.8)	22.90	229.00	.964	96(29.3)	72.11	1669	.144	203(61.9)	160.62	11813	.321	328	248.92	27530	.168
	Government	16(9.1)	23.19			41(22.9)	61.71			125(68.0)	170.96			182	267.56		
Total		45(8.8)				137(26.9)				328(64.3)				510			

Note. MR = Mean Rank, Low level = 1- 1.33, Moderate = 2.34-3.66, High = 3.67-5.0, the values in bold indicate significant effect of demographics on PAV

The results in Table 4.4 indicate that there was a statistically significant effect of ($X^2 = 8.963, p = .030$) parental/guardian education on performance avoidance achievement goal orientation (PAV) in which adolescent students whose parents/guardians had attained primary school education had a higher mean rank (MR = 177.51) than those whose parents/ guardians had not attained any education (MR = 133.21) or had either attained secondary (MR = 165.01) or tertiary education (MR = 172.44). Results further indicate that there was a statistically significant effect of receiving Compassion International support ($U = 166.00, p = .049$) on low performance avoidance achievement goal orientation (PAV) in which the beneficiaries had a higher mean rank (MR = 27.26) than non-beneficiaries (MR = 19.88).

Results of this study imply that while at low levels, receiving Compassion Support, significantly influences PAV, it is influenced by Parents/Guardians' education at high levels with the beneficiaries adopting higher levels of PAV than non-beneficiaries and adolescents whose parental/guardian education level was at primary school adopting higher levels of PAV. However, there was no statistically significant difference in PAV between the participants in the rest of the low, moderate and high levels as well as overall demographic characteristics. These results indicate that learners adopt different levels of PAV irrespective of their differences in gender, age, class, parents/guardians' marital status and parents/guardians' income levels. The differences in proportions of participants in the different levels of PAV are not statistically significant.

4.2 Demographic Variations in Overall Self-Efficacy Levels

This section describes participant self-efficacy levels and their distribution across different demographic characteristics. The differences in self-efficacy levels across demographic characteristics are presented based on Kruskal Wallis test results for the three groups and Mann-Whitney U test results for the two groups. The information is presented according to the categories of age, gender, Compassion International support beneficiary, school type, class, parental/guardian marital status, parental/guardians' education level and paternal/guardian's income.

Table 4.5: Overall Self-Efficacy and Demographic Characteristics of Participants

Demographic Characteristics		Kruskal Wallis Test													Total		
		Overall Self-efficacy Levels															
		Low				Moderate				High			n	M R	X ²	p	
n (%)	M R	X ²	p	n (%)	M R	X ²	p	n (%)	M R	X ²	p						
Age Categories	Early (12-14)	5(15.2)	5.38	4.515	.105	20(60.6)	162.35	2.965	.227	8(24.2)	49.94	5.110	.078	33	220.85	5.87	.053
	Middle (15-17)	11(4.2)	7.38			175(66.8)	187.30			76(29.0)	63.49			262	270.00		
	Late (18-21)	6(2.8)	2.00			159(74.0)	169.67			50(23.3)	76.41			215	243.15		
Participants Class	Senior One	7(5.3)	6.63	3.638	.162	83(63.4)	189.90	10.363	.016	41(31.3)	68.87	6.742	.081	131	274.58	9.93	.019
	Senior Two	8(5.6)	6.13			93(65.0)	199.97			42(29.4)	61.25			143	274.33		
	Senior Three	2(1.7)				89(75.4)	161.53			27(22.9)	60.07			118	236.97		
	Senior Five	5(4.2)	2.00			89(75.4)	160.28			24(20.3)	84.46			118	230.03		
Parents/ Guardian's Marital Status	Married	16(4.0)	5.13	.657	.417	284(70.1)	171.70		.023	105(25.9)	67.64	2.009	.570	405	249.04	5.96	.113
	Single	2(7.1)	7.00			18(64.3)	238.39	9.544		8(28.6)	57.81			28	285.41		
	Widowed	2(3.9)				33(64.7)	203.92			16(31.4)	76.03			51	296.12		
	Divorced	2(7.7)				19(73.1)	170.32			5(19.2)	52.70			26	244.29		
Parent's/ Guardian's Education Level	No Education	2(2.4)	3.00	1.965	.580	51(62.2)	197.53	2.852	.415	29(35.4)	74.36	2.624	.453	82	294.16	6.74	.080
	Primary	5(3.5)	6.88			99(70.2)	170.36			37(26.2)	65.93			141	246.84		
	Secondary	10(5.5)	4.50			127(70.2)	173.18			44(24.3)	69.61			181	248.74		
	Tertiary Education	5(4.7)	5.50			77(72.6)	182.78			24(22.6)	57.75			106	248.66		
Parent's/ Guardian's Income	0-100,000	3(7.1)	6.08	.833	.656	24(57.1)	190.45	9.495	.009	15(35.7)	73.04	6.141	.046	42	274.51	14.159	.001
	100,001 – 250,000	9(3.1)	7.00			202(69.2)	150.78			81(27.7)	57.10			292	221.76		
	250,0001 – 500,000	7(7.1)	5.17			69(70.4)	165.69			22(22.4)	52.79			98	227.46		

(Continued)

Table 4.5: Overall Self-Efficacy and Demographic Characteristics of Participants (continued)

Demographic Characteristics		Mann-Whitney Test															
		Low				Moderate				High				Total			
		n (%)	MR	U	p	n (%)	MR	U	p	n (%)	MR	U	p	n	MR	U	p
Gender of Participants	Male	7(3.0)	5.50	12.00	>.05	166(71.9)	179.59	15422.5	.784	58(25.1)	64.66	2039	.457	231	253.25	31704	.753
	Female	15(5.4)	5.50			188(67.4)	176.60			76(27.2)	69.67			279	257.36		
Compassion International support	Nonbeneficiary	16(5.0)	5.44	7.5	.889	238(73.9)	167.90			68(21.1)	60.60			322	231.71		
	Beneficiary	6(3.2)	5.75			116(61.7)	198.81	11448.	.008	66(35.1)	74.61	1774.50	.036	188	296.24	22608	<.01
School Type	Private	12(3.6)	1.00	.000	.105	243(73.6)	173.40	12419.0	.210	75(22.7)	62.69	1852	.105	330	245.88	2652	.046
	Government	10(5.6)	6.00			111(61.7)	188.12			59(32.8)	73.61			180	273.14		
Total		22(4.3)				354(69.4)				134(26.3)				510			

Note. MR = Mean Rank Low level = 1- 1.33, Moderate = 2.34-3.66, High = 3.67-5.0, the values in bold indicate significant effect of

demographics on self-efficacy

Results in Table 4.5 indicate that there was a statistically significant effect of age categories ($X^2 = 26.306, p < .053$) on overall self-efficacy with middle adolescents having a higher mean rank (MR= 270.00) than early adolescents (MR= 220.85) and late adolescents (MR= 243.15). Results further indicate that there was a statistically significant effect of students class ($X^2 = 10.363, p < .016$) on overall moderate self-efficacy with students in senior two having a higher mean rank (MR = 199.97), than those in senior one (MR = 189.90), three (MR = 161.53) and five (MR = 160.28), and overall self-efficacy ($X^2 = 5.87, p < .019$), with students in senior one and two having similar higher mean ranks (MR = 274.58), (MR = 274.33) than those in senior three (MR = 236.97), and five (MR= 230.03). Results further indicate that there was a statistically significant effect of parental/guardian marital status ($X^2 = 9.544, p < .023$) on overall self-efficacy at a moderate level with single parents having higher mean rank (MR= 238.39) than those who were married, divorced and widowed respectively.

Results further indicate a statistically significant effect of parental/guardian income on moderate self-efficacy ($X^2 = 9.495, p < .009$), and high self-efficacy ($X^2 = 6.141, p < .046$) on total self-efficacy ($X^2 = 14.159, p < .001$) whereby parents whose level of income was at 0-100,000 Uganda Shillings had higher mean ranks for moderate, high and overall self-efficacy (MR = 190.45), (MR = 73.04), (MR = 274.51), than those who earned 100,001-250,000 (MR = 150.78) (MR = 57.10) (MR = 221.76), and 250,001 to 500,000 (MR = 165.69), (MR = 52.79), (MR = 227.46) Ugandan shillings respectively.

Results further indicate a significant effect of receiving Compassion International support on overall moderate self-efficacy ($U = 11448, p = .008$), overall high self-efficacy ($U = 1774.50, p < .036$) and overall total self-efficacy ($U = 22608, p < .01$) in which the beneficiaries had higher mean ranks for moderate (MR = 198.81), high (MR = 74.61), total self-efficacy (MR = 296.24) than non-beneficiaries at moderate (MR = 167.90), high (MR = 60.60) and total self-efficacy (MR = 231.71). Results further indicate that there was a statistically significant effect ($U = 2652, p = .046$) of school type on total overall self-efficacy (see Table 4.5).

Results imply that age, class, parental/guardian marital status, parental/guardian income level, Compassion International support and school type significantly influence self-efficacy at different levels. However, there was no statistically significant influence of gender and parental/guardian education on overall self-efficacy.

Table 4.6: Social Self-Efficacy and Demographic Characteristics of Participants

Kruskal Wallis Test																	
Demographic Characteristics		Social Self- efficacy Levels												Total			
		Low				Moderate				High				n	M R	X²	p
		n (%)	M R	X²	p	n (%)	M R	X²	p	n (%)	M R	X²	p				
Age Categories	Early (12-14 Years)	3(9.1)	6.67	2.643	.267	22(66.7)	150.39	.103	.950	8(24.2)	62.25	5.974	.050	33	211.05	6.382	.041
	Middle (15-17years)	9(3.4)	11.89			146(55.7)	155.11			107(40.8)	86.64			262	269.41		
	Late (18-21 Years)	11(5.1)	13.55			138(64.2)	152.29			66(30.7)	101.55			215	245.37		
Participants Class	Senior One	6(4.6)	10.58	.557	.906	80(61.1)	172.88	5.589	.133	45(34.4)	92.38	3.605	.3307	131	264.85	6.482	.091
	Senior Two	5(3.5)	11.50			72(50.3)	142.83			66(46.2)	82.96			143	274.03		
	Senior Three	4(3.4)	12.75			75(63.6)	146.09			39(33.1)	92.73			118	247.29		
	Senior Five	8(6.8)	13.00			79(66.9)	150.65			31(26.3)	103.94			118	230.87		
Parents/ Guardian's Marital Status	Married	21(5.2)	12.76	3.316	.069	241(59.5)	144.23	18.945	<	143(35.3)	94.42	5.097	.165	405	249.68		.163
	Single	2(7.1)	4.00			14(50.0)	197.96		.01	12(42.9)	73.83			28	283.41		
	Widowed	0(0.0)				34(66.7)	206.44			17(33.3)	90.53			51	292.80		5.117
	Divorced	0(0.0)				17(65.4)	142.47			9(34.6)	60.39			26	242.98		
Parent's/ Guardian's Education Level	No Education	2(2.4)	12.75	5.492	.139	50(61.0)	190.45	11.838	.008	30(36.6)	104.62		.279	82	289.10	5.497	.139
	Primary	10(7.1)	10.70			85(60.3)	150.79			46(32.6)	95.11			141	243.89		
	Secondary	7(3.9)	16.29			107(59.1)	139.13			67(37.0)	83.58	3.843		181	249.20		
	Tertiary Education	4(3.8)	7.38			64(60.4)	152.26			38(35.8)	88.36			106	255.71		
Parent's/ Guardian's Income	0-100,000	1(2.4)	13.41	2.433	.296	24(57.1)	158.46	4.202	.122	17(40.5)	98.17	7.664	.022	42	267.78	6.212	.045
	100,001 – 250,000	9(3.1)	9.70			179(61.3)	156.34			104(35.6)	72.59			292	231.32		
	250,0001 – 500,000	11(11.2)	15.75			56(57.1)	131.67			31(31.6)	80.85			98	239.23		

(Continued)

Table 4.6: Social Self-efficacy and Demographic Characteristics of Participants (continued)

		Mann-Whitney U Test															
		Low			Moderate			High			Total						
Demographic Characteristics		n (%)	M R	U	p	n (%)	M R	U	p	n (%)	M R	U	p	n	M R	U	P
Gender of Participants	Male	10(4.3)	13.05	54.500	.497	133(57.6)	159.86	10659	.266	88(38.1)	80.55	3172.	.008	231	261.86	30754.5	.374
	Female	13(4.7)	11.19			173(62.0)	148.61			93(33.3)	100.89			279	250.23		
Compassion Support	Non-beneficiary	19(5.9)	11.84	35.000	.800	202(62.7)	142.98	8379.5	.003	101(31.4)	81.12	8356.0	.004	322	233.47	23173	<. 01
	Beneficiary	4(2.1)	12.75			104(55.3)	173.93			80(42.6)	103.47			188	293.24		
School Type	Private	12(3.6)	14.21	39.500	.089	210(63.6)	153.07	9989.5	.899	108(32.7)	81.19	2883	.002	330	246.81	26831.	.071
	Government	11(6.1)	9.59			96(53.3)	154.44			73(40.6)	105.51			180	271.44		
Total		23(4.5)				306(60.0)				181(35.5)				510			

Note. MR = Mean Rank, Low level = 1- 1.33, Moderate = 2.34-3.66, High = 3.67-5.0, the values in bold indicate significant effect of demographics social self-efficacy

Results in Table 4.6 indicate that there were statistically significant effects of gender, age, class, parental/guardian marital status and parental/guardian income, Compassion International support, school type, at varying social self-efficacy levels (Table 4.6).

However, there was no statistically significant difference between low, moderate, high and social self-efficacy in relation to adolescent students 'parents/guardians' education level. This implies that while gender, age, class and social economic support influence adolescents' social self-efficacy, parental/guardian education level does not. Proportions of participants' social self-efficacy levels indicate that overall, the majority (60.0%) of the adolescent students in this study had moderate levels of social self-efficacy.

Overall, the results suggest that certain factors such as being a beneficiary of Compassion International support, gender disparities, variations in age, parents having not attained any education, being female, belonging to a government school and having parent/guardian with high income level are associated with high social self-efficacy at varying levels (see Table 4.6).

Table 4.7: Emotional Self-efficacy and Demographic Characteristics of Participants

Demographic Characteristics		Kruskal Wallis Test												Total			
		Emotional Self Efficacy Levels															
		Low				Moderate				High							
		n (%)	MR	X ²	p	n (%)	MR	X ²	p	n (%)	MR	X ²	P	n	MR	X ²	p
Age Categories	Early (12-14 years)	13(39.4)	40.62	2.868	.238	16(48.5)	129.25	1.364	.505	4(12.1)	60.13	3.562	.168	33	184.98	8.378	.015
	Middle (15-17)	54(20.6)	51.70			152(58.0)	155.15			56(21.4)	47.82			262	257.21		
	Late (18-21)	36(16.7)	56.56			134(62.3)	150.01			45(20.9)	58.81			215	264.24		
Participants Class	Senior One	27(20.6)	50.61	2.891	.409	73(55.7)	144.71	1.558	.669	31(23.7)	56.37		.392	131	257.65	2.957	.398
	Senior Two	30(21.0)	53.87			87(60.8)	155.94			26(18.2)	45.25			143	250.70		
	Senior Three	26(22.0)	57.79			73(61.9)	145.68			19(16.1)	59.39		2.996	118	241.35		
	Senior Five	20(16.9)	43.55			69(58.5)	159.25			29(24.6)	52.16			118	273.08		
Parents/ Guardian's Marital Status	Married	85(21.0)	50.91	1.632	.652	243(60.0)	150.51	2.152	.541	77(19.0)	54.20	3.374	.337	405	250.10	4.327	.228
	Single	4(14.3)	57.13			19(67.9)	132.84			5(17.9)	33.40			28	246.48		
	Widowed	11(21.6)	61.14			22(43.1)	163.18			18(35.3)	56.75			51	290.98		
	Divorced	3(11.5)	42.67			18(69.2)	170.22			5(19.2)	40.60			26	279.77		
Parent's /Guardian's Education Level	No Education	10(12.2)	45.50	7.931	.047	50(61.0)	150.60		545	22(26.8)	60.82	5.112	.164	82	285.16	4.106	.250
	Primary	30(21.3)	53.38			86(61.0)	156.93			25(17.7)	57.80			141	251.95		
	Secondary	40(22.1)	59.93			101(55.8)	142.02	2.137		40(22.1)	51.06			181	250.76		
	Tertiary Education	23(21.7)	39.24			65(61.3)	159.73			18(17.0)	41.08			106	245.37		
Parent's /Guardian's Income	0-100,000	12(15.4)	52.35	3.529	.171	44(56.4)	149.68	1.304	.521	22(28.2)	54.02	.505	.777	78	266.77		.059
	100,001 – 250,000	42(19.2)	57.70			128(58.4)	144.37			49(22.4)	52.47			219	229.53	5.676	
	250,0001 – 500,000	29(23.2)	41.42			74(59.2)	161.63			22(17.6)	47.42			125	244.89		

(Continued)

Table 4.7: Emotional Self-Efficacy and Demographic Characteristics of Participants (continued)

Demographic Characteristics		Mann-Whitney U Test												Total			
		Emotional Self Efficacy Levels															
		Low				Moderate				High							
		n (%)	MR	U	p	n (%)	MR	U	p	n (%)	MR	U	P	n	MR	U	p
Gender of Participants	Male	46(19.9)	52.48	.022	.881	145(62.8)	157.26	1.230	.267	40(17.3)	51.08	.265	.607	231	252.79	31598	.705
	Female	57(20.2)	51.61			157(63.2)	146.18			65(16.6)	54.18			279	257.75		
Compassion Support	Non-beneficiary	74(23.0)	51.47	1034	.769	197(61.2)	146.92	9441	.209	51(15.8)	48.49	1147	.136	322	236.56	24169	<.01
	Beneficiary	29(15.4)	53.34			105(55.9)	160.09			54(28.7)	57.26			188	287.94		
School Type	Private	68(20.6)	53.79	1068	.386	204(61.8)	154.77	9328	.343	58(17.6)	49.51	1160	.187	330	250.32	27990.	.281
	Government	35(19.4)	48.53			98(54.4)	144.68			47(26.1)	57.31			180	265.00		
Total		103(20.2)				302(59.2)				105(20.6)				510			

Note: MR= Mean Rank, Low level = 1-1.33, Moderate = 2.34-3.66, High = 3.67-5.0, the values in bold indicate significant effect of demographics on emotional self-efficacy

The results in Table 4.7 indicate that there was a statistically significant effect of age categories ($X^2 = 8.378, p = .01$) on overall emotional self- efficacy with late adolescents having a higher mean rank (MR = (MR = 264.24) than early (MR = 184.98) and middle (MR = 257.21) adolescents. Results further indicate that there was a statistically significant effect of parental/guardian education ($X^2 = 7.931, p = .047$) on low level of emotional self-efficacy in which adolescent students whose parents/guardians had attained secondary school education had a higher mean rank (MR = 59.93) than those whose parents/ guardians had not attained any education (MR = 45.50) or had attained primary only (MR = 53.38) or up to tertiary education (MR = 59.93). Results further indicate that there was a statistically significant effect of parental/guardian income ($X^2 = 5.676, p = .059$) on overall emotional self-efficacy with adolescents whose parental/guardian income lies between 0-100,000 Ugandan shillings having a higher mean rank than those whose parents/guardians earned above 100,000 Ugandan shillings (see Table 4.7).

Results further indicate that there was a statistically significant effect of receiving Compassion International support ($U = 24169, p <.01$) on overall emotional self-efficacy whereby the beneficiaries had a higher mean rank (MR = 287.94) than non-beneficiaries (MR = 236.56). Results of this study imply that while overall age, parental/guardian income and Compassion International support significantly influence emotional self-efficacy, at a low level, parents/guardians' education influences emotional self-efficacy among adolescent students. Late adolescents were likely to have higher emotional self-efficacy compared to their counterparts in lower age categories, whose

parental/guardian education was secondary school and Compassion International supported.

International support beneficiaries had overall high emotional self-efficacy. However, there was no statistically significant difference between the participants in the rest of the low, moderate and high levels in emotional self-efficacy and adolescents' school type, class and parental/guardian marital status. These results imply that adolescent students have varying emotional self-efficacy levels irrespective of their differences in school type, class and parents/guardians' marital status.

Table 4.8: Academic Self-efficacy and Demographic Characteristics of Participants

Demographic Characteristics		Kruskal Wallis Test												Total			
		Academic Self Efficacy Levels															
		Low n (%)				Moderate n (%)				High n (%)				n	MR	X ²	p
		n (%)	MR	X ²	p	n (%)	MR	X ²	p	n (%)	MR	X ²	p	n	MR	X ²	p
Age Categories	Early (12-14)	3(9.1)	4.17	3.570	.168	10(30.3)	58.15	8.203	.017	20(60.6)	106.15	4.99	.082	33	280.94	11.200	.004
	Middle (15-17)	7(2.7)	10.64			108(41.2)	117.60			147(56.1)	126.18			262	273.17		
	Late (18-21)	7(3.3)	9.43			115(53.5)	121.55			93(43.3)	142.57			215	230.06		
Participants Class	Senior One	4(3.1)	10.63	1.813	.612	45(34.4)	110.22	1.830	.609	82(62.6)	128.66	11.263	.010	131	287.21	22.957	<.01
	Senior Two	4(2.8)	7.50			58(40.6)	119.07			81(56.6)	120.35			143	277.32		
	Senior Three	7(5.9)	9.86			55(46.6)	110.70			56(47.5)	122.08			118	242.22		
	Senior Five	2(1.7)	5.75			75(63.6)	124.09			41(34.7)	165.73			118	207.14		
Parents/ Guardian's Marital Status	Married	14(3.5)	9.04	1.738	.419	189(46.7)	114.77	1.561	.668	202(49.9)	130.43	3.414	.332	405	251.55	4.213	.239
	Single	1(3.6)	14.00			9(32.1)	134.33			18(64.3)	132.61			28	295.11		
	Widowed	0(0.0)				24(47.1)	128.73			27(52.9)	144.98			51	277.69		
	Divorced	2(7.7)	6.25			11(42.3)	115.55			13(50.0)	98.58			26	230.85		
Parent's /Guardian's Education Level	No Education	2(2.4)	10.50	3.065	.382	33(40.2)	116.89	.609	.894	47(57.3)	144.30	4.976	.174	82	280.14	2.766	.429
	Primary	4(2.8)	11.50			69(48.9)	112.00			68(48.2)	140.21			141	251.64		
	Secondary	6(3.3)	6.42			83(45.9)	120.20			92(50.8)	120.04			181	251.22		
	Tertiary Education	5(4.7)	9.50			48(45.3)	118.72			53(50.0)	123.96			106	248.89		
Parent's /Guardian's Income	0-100,000	2(2.6)	9.00	.473	.789	31(39.7)	117.77	.423	.809	45(57.7)	137.92	12.817	.002	78	273.50		.001
	100,001 – 250,000	4(1.8)	9.61			93(42.5)	111.19			122(55.7)	133.34			219	231.75	13.069	
	250,0001 – 500,000	8(6.4)	7.63			62(49.6)	118.64			55(44.0)	90.96			125	218.97		

(Continued)

Table 4.8: Academic Self-efficacy and Demographic Characteristics of Participants (continued)

Demographic Characteristics		Mann-Whitney U Test												Total			
		Academic Self-efficacy Levels															
		Low				Moderate				High							
		n (%)	MR	U	p	n (%)	MR	U	p	n (%)	MR	U	p	n	MR	U	p
Gender of Participants	Male	4(1.7)	10.13	21.500	.592	114(49.4)	106.64	5602.5	.021	113(48.9)	130.40	8294	.985	231	247.28	30325	.251
	Female	13(4.7)	8.65			119(42.7)	126.92			147(52.7)	130.58			279	262.31		
Compassion International support	Nonbeneficiary	14(4.3)	9.54	13.500	.362	157(48.8)	114.13	5515.	.346	151(46.9)	126.72	7659	.336	322	241.01	25603	.004
	Beneficiary	3(1.6)	6.50			76(40.4)	122.93			109(58.0)	135.73			188	280.31		
School Type	Private	11(3.3)	7.91	21.000	.256	158(47.9)	113.72	5406.5	.277	161(48.8)	127.53	7491.5	.413	330	247.04	26908	.079
	Government	6(3.3)	11.00			75(41.7)	123.91			99(50.0)	135.33			180	271.01		
Total		17(3.3)				233(45.7)				260(51.0)				510			

Note. MR = Mean Rank, Low level = 1- 1.33, Moderate = 2.34-3.66, High = 3.67-5.0, the values in bold indicate significant effect of demographics academic self-efficacy

The results in Table 4.8 indicate that there was a statistically significant effect of age ($X^2 = 8.203, p = .017$) on academic self-efficacy at a moderate level with late adolescents having a higher mean rank (MR = 121.55) than middle (MR = 117.60) and early (MR = 58.15) adolescents. Results further indicate that age had a statistically significant effect on total academic self-efficacy ($X^2 = 11.200, p = .004$) where by early adolescents (MR = 280.94) had a higher mean rank than middle (MR = 273.17) and late (MR = 58.15) adolescents. Results further indicate that there was a statistically significant effect of class ($X^2 = 11.263, p = .010$) on high academic self-efficacy in which adolescent students in senior five had a higher mean rank (MR = 165.73) than senior one (MR = 128.66), two (MR = 120.35) and three (MR = 53.38). Results further indicate that there was statistically significant effect of parental/guardian income ($X^2 = 12.817, p = .002$) on high academic self-efficacy with adolescents whose parental/guardian income lies between 0-100,000 Ugandan shillings having a higher mean rank (MR = 137.92) than those whose parents/guardians earned above 100,000 Ugandan shillings (see Table 4.8). Results further indicate that there was a statistically significant effect of gender ($U = 5602, p < .021$) on moderate academic self-efficacy with females having a higher mean rank (MR = 126.92) than males (MR = 106.64).

Results further indicate that receiving Compassion International support significantly ($U = 7659, p < .004$) influenced overall academic self-efficacy whereby the beneficiaries had a higher mean rank (MR = 287.94) than non-beneficiaries (MR = 126.72). Results of this study imply that age influences academic self-efficacy at moderate and total academic levels.

Whereas senior five students were likely to have high academic self-efficacy at its high level, overall, students in senior one had the highest total academic self-efficacy. Adolescent students whose parents/guardians were low income earners were likely to have high academic self-efficacy at its high level and the overall. At the moderate level Compassion International support significantly influenced academic self-efficacy, where by the beneficiaries had higher academic self-efficacy than their non-beneficiary counterparts. However, school type, parental/guardian marital status and parental/guardian education level had no statistically significant effect on academic self-efficacy. These results imply that adolescent students have varying academic self-efficacy levels irrespective of their differences in school type, parental/guardian marital status and income.

4.3 Demographic Variations in Academic Engagement Levels

This section presents descriptive characteristics of academic engagement levels among adolescent students in Kabale district, Southwestern Uganda. It further presents demographic characteristics of participants and a description of their distribution within academic engagement levels. The information is presented according to Kruskal Wallis (for three groups) and Mann-Whitney U (for two groups) test results within the categories of low, moderate and high for overall academic engagement and sub-constructs across demographic characteristics.

Table 4.9: Overall Academic Engagement Levels and Demographic Characteristics of Participants

Demographic Characteristics		Kruskal Wallis Test												Total			
		Overall Academic Engagement Levels															
		Low				Moderate				High							
		n (%)	MR	X ²	P	n (%)	MR	X ²	P	n (%)	MR	X ²	p	n	MR	X ²	p
Age Categories	Early (12-14 Years)	1(3.0)	8.50	4.243	.120	13(39.4)	92.27	1.771	.413	19(57.6)	115.03	2.185	.335	33	239.59	6.448	.040
	Middle (15-17)	12(4.6)	2.00			94(35.9)	106.77			156(59.5)	140.71			262	271.61		
	Late (18-21)	16(7.4)	5.42			95(44.2)	96.55			104(48.4)	144.83			215	238.31		
Participants Class	Senior One	5(3.8)	4.75	1.653	.648	36(27.5)	112.85	9.817	.020	90(68.7)	131.31	1.968	.579	131	287.41	14.749	.002
	Senior Two	5(3.5)	2.00			59(41.3)	104.18			79(55.2)	142.41			143	261.27		
	Senior Three	6(5.1)	5.00			52(44.1)	110.68			60(50.8)	149.16			118	252.22		
	Senior Five	13(11.0)	5.88			55(46.6)	80.74			50(42.4)	143.60			118	216.37		
Parents/Guardian's Marital Status	Married	20(4.9)	5.42	.701	.704	161(39.8)	99.34	1.950	.583	224(55.3)	138.79	1.197	.754	405	255.17		.981
	Single	3(10.7)	4.75			9(32.1)	103.78			16(57.1)	157.31			28	266.46		
	Widowed	3(5.9)				21(41.2)	100.14			27(52.9)	138.37			51	253.81	.1773	
	Divorced	3(11.5)	3.00			11(42.3)	124.45			12(46.2)	155.00			26	252.15		
Parent's/Guardian's Education Level	No Education	3(3.7)	8.50	2.664	.446	27(32.9)	95.22	6.424	.093	52(63.4)	157.29	3.541	.315	82	286.08	8.923	.030
	Primary	1(0.8)	4.00			49(37.1)	85.34			82(62.1)	143.02			132	263.08		
	Secondary	9(5.0)	3.88			72(39.8)	111.74			100(55.2)	133.14			181	254.49		
	Tertiary Education	7(6.6)	5.67			53(50.0)	103.83			46(43.4)	133.04			106	223.48		
Parent's/Guardian's Income	0-100,000	4(5.1)	4.75	.636	.728	32(41.0)	99.43	.266	.875	42(53.8)	145.59	3.175	.204	78	279.72	22.787	< .01
	100,001 – 250,000	10(4.6)	6.00			65(29.7)	103.89			144(65.8)	125.05			219	212.02		
	250,0001 – 500,000	7(5.6)	4.38			64(51.2)	98.68			54(43.2)	129.19			125	221.16		

(Continued)

Table 4.9: Overall Academic Engagement Levels and Demographic Characteristics of Participants (continued)

Demographic Characteristics		Mann-Whitney U Test															
		Overall Academic Engagement Levels												Total			
		Low			Moderate			High			Total						
		n (%)	M R	U	P	n (%)	M R	U	P	n (%)	M R	U	p	n	M R	U	p
Gender of Respondents	Male	12(5.2)	7.50	.000	.014	97(42.0)	102.48	4898.0	.730	122(52.8)	136.02	9105	.412	231	247.28	30325	.251
	Female	17(6.1)	3.00			105(37.6)	99.65			157(56.3)	144.01			279	262.31		
Compassion International support	Non-Beneficiary	22(6.8)	4.86	6.000	.889	144(44.7)	99.50	3888	.561	156(48.4)	134.99	8813	.200	322	241.01	25603	.004
	Beneficiary	7(3.7)	5.50			58(30.9)	104.78			123(65.4)	147.43			188	280.31		
School Type	Private	24(7.3)	4.42	5.500	.362	140(42.4)	98.86	4011.5	.433	166(50.3)	139.92	9338	.884	330	247.04	26908	.079
	Government	5(2.8)	6.17			62(34.4)	105.80			113(62.8)	141.36			180	271.01		
Total		29(5.7)				202(39.6)				279(54.7)				510			

Note. MR= Mean Rank, Low level = 1- 1.33, Moderate Level = 2.34-3.66, High = 3.67-5.0, the values in bold indicate significant effect of demographics on overall academic engagement

Results in Table 4.9 indicate that there was a statistically significant effect of students age ($X^2 = 6.448, p < .04$) on overall academic engagement with middle adolescents having a higher mean rank (MR= 271.61), than early (MR= 239.59) and late (MR = 238.31) adolescents. Results further indicate that there was a statistically significant difference in students class at moderate ($X^2 = 9.817, p < .020$) with students in senior one having a higher mean rank than those in senior three, two and five. The same patterns in class differences were observed at total overall self-efficacy ($X^2 = 14.749, p < .002$). Results further indicate that there was a statistically significant effect of parental/guardian education ($X^2 = 8.923, p < .030$) on total overall academic engagement with uneducated parents having higher mean rank (MR = 286.08) than those who attained primary, secondary and tertiary education respectively. Results further indicate a statistically significant effect of parental/guardian income on total overall academic engagement ($X^2 = 22.787, p < .01$), whereby parents' whose income was at 0-100,000 Uganda shillings had higher mean ranks (MR = 279.72) than those who earned 250,001 to 500,000 (MR = 221.16) and 100,001-250,000 (MR = 212.02) Ugandan shillings respectively.

Results further indicate that there was a statistically significant effect of gender ($U = .000, p < .014$) on overall academic engagement at a low level with males having a higher mean rank than females (see Table 4.9). Results further indicate a significant effect of receiving Compassion International support ($U = 25603, p = .004$) on overall total academic engagement in which the beneficiaries had higher mean rank (MR = 280.31) than non-beneficiaries. These results imply that middle age adolescents, students in senior one, compassion supported adolescents whose parents/guardians did not attain any

level of education and had the lowest income, were likely to have overall higher academic engagement levels than their counterparts. However, there was no statistically significant difference in participants' school type, their parental/guardian education at low, moderate and high academic engagement levels.

The qualitative narratives resonate with quantitative findings that receiving external support influenced students' academic engagement. External support provided by Compassion International included goal setting training. This arose as one of the major factors that impacted heavily on the Compassion International support beneficiaries' motivation to engage in academics. Issues raised here included holiday weekly (referred to as center days), support offered by compassion staff and academic guests at compassion centers who train goal setting skills. A staff in charge of students' academic welfare, in an in-depth interview referring to Compassion International support beneficiaries stated that *'They are motivated to commit to leaning by a tool they fill twice a year called my life for tomorrow', we have now called it life planning tool. So, in this tool a student writes the future career he wishes to pursue and also objectives towards the future careers.*

This implies that the in addition to the what Compassion International support beneficiaries learn at school, they also have an opportunity to set goals on how best they can achieve their learning objectives in preparation for job market. Compassion International support offers more than just school fees but also other skills that may facilitate successful academic engagement and lifelong learning.

He attested to this by further stating that, *but in this life planning tool, we don't only emphasize career but also spiritual, social-emotional and physical aspects of a child's life. We also have child development progress report (CDPR... we assess a child's development in accordance with education attainment and the child knows that on my academics, I should be doing this at this age'* (IS/KI/CW/01, compassion worker).

Qualitative narratives further revealed that Compassion International offers mentorship support. The **mentorship support** depicted in narrative made by one of the compassion officers who stated, *"We make sure that each sponsored child is attached to a mentor who keeps advising them. There is an alumni day when we call the people who passed through compassion to come and visit the area to inspire the beneficiaries. They meet multiple people of high profile who come to teach them about discipleship, sexual purity or a skill. These people inspire them to settle down and concentrate on their studies for a better future'* (IS/KI/CW/02, compassion worker). This means that Compassion International support beneficiaries have successful people they look up too and have a desire to be like, in future. This does not only help them to engage in academic but also builds their confidence through vicarious learning which consequently influences the way they engage academically.

The narrative from a compassion beneficiary and the director of studies attest to the words stated by one of the compassion beneficiaries and agree that receiving external support in terms of mentorship increases an individual's academic engagement.

I have a mentor who advises me on how to successfully pursue my education. We meet three times a year and there is a form I fill to keep me focused on my

goals. When I do not meet some of them, I talk with my mentor about it and we lay strategies on how to do better next time. I want to be like her when I grow up. She is a lawyer and I like her lifestyle. I also study hard because I do not want to disappoint her (IS/KI/CB/02, Compassion International support beneficiary). ‘The drive behind their performance is to pass, excel and please their parents. Others are driven by the zeal observed from the role models’ (IS/KI/DOS/02, a director of studies).

External support was narrated in form of **External Rewards** expected from guardians. In their opinions, participants, revealed that external rewards especially offered to Compassion International support beneficiaries were among the factors that enhanced academic engagement among adolescent students revealed by the following narratives;

‘My classmates mostly the Compassion International supported have been promised that if they perform well, they will be supported at the university and therefore they work hard and engage better to win others’ (IS/KI/NCB/01, adolescent, Compassion International support non-beneficiary). *Compassion International support beneficiaries are inspired by the sponsors themselves, as they write letters seeking to know the students’ performance.*

This makes them to work hard such that they put something good in the next letter... we make sure that we pay a hundred percent school fees for the best performers and they are motivated because they know that they can reach at any level of education despite their poor backgrounds (IS/KI/CW/01). *‘Compassion gives scholarships to the best academic performers, for example we have a beneficiary at one of the best schools in Kabale district and another one is doing a Bachelor of Laws at one of the accredited universities in*

Southwestern Uganda region and all these inspire the young children to work hard and be the best performers in class' (IS/KI/CW/02, compassion worker).

'...While awarding marks depending on their performance, you see a student scared about their parents and guardians because of poor performance in comparison with their classmates' (IS/KI/T/01 a teacher at a private school).

This implies that rewards that result in education accomplishment like tuition to further ones education motivate students to engaging in academic work. This could probably explain the reason adolescent students receiving external support had higher academic engagement levels than their non-beneficiary counterparts. There is need to sensitise all education stakeholders on what actually influences academic engagement from students' point of view.

Table 4.10: Behavioral Engagement and Demographic Characteristics of the Study Participants

Demographic Characteristics		Kruskal Wallis Test												Total			
		Behavioral Engagement Levels															
		Low				Moderate				High							
		n (%)	M R	X ²	p	n (%)	M R	X ²	p	n (%)	M R	X ²	p	n	M R	X ²	p
Adolescents Age in Years	Early (12-14)	2(6.1)	5.00	.981	.612	10(30.3)	57.70		.226	21(63.6)	194.00	1.217	.544	33	235.85	2.836	.424
	Middle (15-17)	5(1.9)	8.10			60(22.9)	59.80	2.978		197(75.2)	188.92			262	265.88		
	Late (18-21)	7(3.3)	7.79			58(27.0)	70.53			150(69.8)	177.36			215	245.87		
Participants Class	Senior One	3(2.3)	3.83	6.068	.108	27(20.6)	60.50	2.006	.571	101(77.1)	198.09	2.691	.442	131	277.65	8.450	.038
	Senior Two	4(2.8)	11.00			31(21.7)	59.03			108(75.5)	181.95			143	260.80		
	Senior Three	1(0.8)	6.00			29(24.6)	66.62			88(74.6)	173.90			118	255.45		
	Senior Five	6(5.1)	7.25			41(34.7)	69.77			71(60.2)	182.17			118	224.53		
Parents/ Guardian's Marital Status	Married	10(2.5)	8.05	2.188	.335	98(24.2)	60.58	12.383	.006	297(73.3)	184.90	3.735	.292	405	257.97	.977	.807
	Single	2(7.1)	3.75			7(25.0)	90.64			19(67.9)	200.13			28	258.59		
	Widowed	0(0.0)				18(35.3)	63.31			33(64.7)	195.68			51	245.78		
	Divorced	2(7.7)	8.50			5(19.2)	109.00			19(73.1)	143.26			26	232.77		
Parent's /Guardian's Education Level	No Education	0(0.0)		.119	.942	21(25.6)	75.02	2.977	.395	61(74.4)	202.84	4.981	.173	82	114.71		.630
	Primary	4(2.8)	8.00			31(22.0)	64.03			106(75.2)	194.51			141	110.43		
	Secondary	5(2.8)	7.50			42(23.2)	58.51			134(74.0)	174.11			181	114.71	.232	
	Tertiary Education	5(4.7)	7.10			34(32.1)	65.82			67(63.2)	172.75			106	110.43		
Parent's /Guardian's Income	0-100,000	1(2.4)	5.63	1.409	.494	7(16.7)	64.76	.263	.877	34(81.0)	188.21	3.306	.191	42	274.69	14.528	.001
	100,001 – 250,000	4(1.4)	7.75			65(22.3)	62.09			223(76.4)	163.11			292	222.25		
	250,0001 – 500,000	3(3.1)	8.58			30(30.6)	66.68			65(66.3)	188.84			98	226.26		

(Continued)

Table 4.10: Behavioral Engagement and Demographic Characteristics of Participants (continued)

Demographic Characteristics		Mann-Whitney U Test															
		Behavioral Engagement Levels												Total			
		Low				Moderate				High							
		n (%)	MR	U	p	n (%)	MR	U	p	n (%)	MR	U	p	n	MR	U	p
Gender of Respondents	Male	8(3.5)	8.50	16.000	.345	59(25.5)	66.37	1925	.596	164(71.0)	178.34	15718	.318	231	247.28	30325	.251
	Female	6(2.2)	6.17			69(24.7)	62.90			204(73.1)	189.45			279	262.31		
Compassion International support	Non-beneficiary	11(3.4)	6.73	8.000	.225	91(28.3)	65.92	1554	.495	220(68.3)	172.63	13667	.009	322	241.01	25603	.004
	Beneficiary	3(1.6)	10.33			37(19.7)	61.00			148(78.7)	202.15			188	280.31		
School Type	Private	8(2.4)	6.13	13.000	.181	90(27.3)	63.93	1658.5	.788	232(70.3)	180.22	14783	.312	330	247.96	2.474	.116
	Government	6(3.3)	9.33			38(21.1)	65.86			136(75.6)	191.80			180	269.32		
Total		14(2.7)				128(25.1)				368(72.2)				510			

Note. MR = Mean Rank, Low level = 1- 1.33, Moderate = 2.34-3.66, High = 3.67-5.0, the values in bold indicate significant effect of

demographics on behavioral engagement

Results in Table 4.10 indicate that there was a statistically significant effect of class ($X^2 = 8.450, p = .038$) on overall behavioral engagement with students in senior one having a higher mean rank (MR = 277.65), than those in senior three (MR = 110.68), two (MR = 104.18) and five (MR = 80.74). Results further indicate that there was a statistically significant effect of parental/guardian marital status ($X^2 = 12.383, p < .006$) on moderate behavioral engagement with single parents/guardians having higher mean rank (MR = 109.00) than those who are married, widowed and single respectively (Table 4.10). Results further indicate a statistically significant effect of parental/guardian income on total behavioral engagement ($X^2 = 14.528, p = .001$), whereby parents whose level of income was at 0-100,000 Uganda Shillings had higher mean ranks (MR = 274.69) than those who earned 250001 to 500000 (MR = 226.26) and 100001-250000 (MR = 222.25) Ugandan shillings respectively.

Results further indicate a significant effect of receiving Compassion International support on total behavioral engagement ($U = 13667, p = .004$) in which the beneficiaries had higher mean rank (MR = 180.22) than non-beneficiaries (MR = 172.63). Results imply that students in senior one, receiving Compassion International Support, adolescents whose parents'/guardians had the lowest income and those with divorced parents/guardians were likely to have higher behavioural engagement levels than their counterparts. However, there was no statistically significant effect of age, gender, school type, parental/guardian education on behavioral engagement.

Table 4.11: Emotional Engagement and Demographic Characteristics of Participants

Demographic Characteristics		Kruskal Wallis Test												Total			
		Emotional Engagement Level															
		Low				Moderate				High							
		n (%)	M R	X ²	p	n (%)	M R	X ²	P	n (%)	M R	X ²	p				n
Age Categories	Early (12-14)	1(3.0)	58.50	2.816	.245	12(36.4)	172.09	6.798	.033	20(60.6)	45.63	.352	.389	33	269.15	5.605	.061
	Middle (15-17)	7(2.7)	54.78			99(37.8)	162.01			156(59.5)	52.42			262	268.56		
	Late (18-21)	10(4.7)	45.49			104(48.4)	137.12			101(47.0)	54.38			215	237.49		
Participants Class	Senior One	4(3.1)	58.28	11.161	.011	52(39.7)	154.10	5.241	.155	75(57.3)	52.10	.280	.964	131	265.77	8.340	.039
	Senior Two	3(2.1)	62.47			49(34.3)	166.05			91(63.6)	51.58			143	277.80		
	Senior Three	2(1.7)	44.23			60(50.8)	147.42			56(47.5)	56.05			118	241.87		
	Senior Five	9(7.6)	37.93			54(45.8)	134.72			55(46.6)	53.24			118	230.70		
Marital Status	Married	15(3.7)	151.07	1.489	.875	173(42.7)	53.14	.409	.938	217(53.6)	53.14	.409	.938	405	252.24	1.090	.780
	Single	1(3.6)	142.61			12(42.9)	60.00			15(53.6)	60.00			28	261.38		
	Widowed	1(2.0)	145.66			21(41.2)	51.69			29(56.9)	51.69			51	268.09		
	Divorced	1(3.8)	173.78			9(34.6)	48.60			16(61.5)	48.60			26	275.21		
Education Level	No Education	2(2.4)	38.60	2.437	.487	35(42.7)	150.54	.326	.955	45(54.9)	65.43	8.918	.030	82	269.85	1.689	.639
	Primary	3(2.1)	55.28			58(41.1)	147.60			80(56.7)	58.02			141	257.88		
	Secondary	7(3.9)	52.98			75(41.4)	154.75			99(54.7)	49.40			181	254.90		
	Tertiary Education	6(5.7)	51.85			47(44.3)	152.35			53(50.0)	38.83			106	242.26		
Parent's /Guardian's Income	0-100,000	1(1.3)	10.17	.296	.863	36(46.2)	109.94	.470	.721	41(52.6)	141.71	2.132	.344	78	274.08	13.613	.001
	100,001 – 250,000	6(2.7)	8.50			83(37.9)	103.36			130(59.4)	123.68			219	223.38		
	250,0001 – 500,000	5(4.0)	9.64			55(44.0)	106.05			65(52.0)	141.66			125	227.01		

(Continued)

Table 4.11: Emotional Engagement and Demographic Characteristics Participants (Continued)

Demographic Characteristics		Mann-Whitney U test															
		Emotional Engagement Levels														Total	
		Low				Moderate				High							
n (%)	MR	U	P	n (%)	MR	U	p	n (%)	MR	U	p	n	MR	U	P		
Gender of Participants	Male	9(3.9)	53.65	1235	.613	99(42.9)	146.29	10627	.318	123(53.2)	50.74	1209.5	.549	231	247.28	30325.	.251
	Female	9(3.2)	50.67			116(41.6)	156.31			154(55.2)	54.39			279	262.31		
Compassion International support	Non-beneficiary	13(4.0)	50.27	945.	.347	145(45.0)	150.25	10096	.733	164(50.9)	44.60			322	241.01		
	Beneficiary	5(2.7)	56.41			70(37.2)	153.84			113(60.1)	60.94			188	280.31		
School Type	Private	11(3.3)	52.57	1151	.785	152(46.1)	148.07	9296	.323	167(50.6)	50.42	1213.5	.333	330	247.04	26908	.079
	Government	7(3.9)	50.89			63(35.0)	158.64			110(61.1)	56.18			180	271.01		
Total		18(3.5)				215(42.2)				277(54.3)				510			

Note. MR = Mean Rank, Low level = 1- 1.33, Moderate = 2.34-3.66, High = 3.67-5.0, the values in bold indicate significant effect of demographics on emotional engagement

Results in Table 4.11 indicate that there was a statistically significant effect of age ($X^2 = 6.798, p = .033$) on moderate emotional engagement and total emotional engagement ($X^2 = 5.605, p = .061$) with early adolescents having a higher mean rank than those in middle and late adolescence. Results further indicate a statistically significant effect of class ($X^2 = 11.161, p = .011$) on a low level of emotional engagement and total emotional engagement ($X^2 = 8.340, p = .039$) whereby students in senior two had a higher mean rank than those in senior one, three and five respectively (Table 4.11). Results further indicate that there was a statistically significant effect of parental/guardian education ($X^2 = 8.918, p < .030$) on high emotional engagement with uneducated parents /guardians having higher mean rank than those who attained primary, secondary and tertiary education levels respectively (Table 4.11). Results further indicate a statistically significant effect of parental/guardian income on total emotional engagement ($X^2 = 13.613, p = .001$), whereby parents whose level of income was at 0-100,000 Uganda Shillings had a higher mean rank (MR = 274.08) than those with a higher income.

Results further indicate a significant effect of receiving Compassion International support ($U = 948.50, p = .006$) on high level emotional engagement and total emotional engagement ($U = 25603, p = .004$) whereby beneficiaries had higher mean ranks than non-beneficiaries (Table 4.11). The study results imply that though both age and class influence total emotional engagement, age further influences it at moderate level while students' class influences it at a low level. Results further imply that at high level of emotional engagement, parental/guardian education and Compassion International support influence emotional engagement while parents/guardians' income influences

total emotional engagement. However, there was no statistically significant difference in participants' gender, school type, parental/guardian marital status at low, moderate and high emotional engagement levels. This implies that irrespective of their gender, school type and parental/guardian marital status students have varying emotional engagement levels.

Table 4.12: Cognitive Engagement and Demographic Characteristics of the Study Participants

Demographic Characteristics		Kruskal Wallis Test												Total			
		Cognitive Engagement Levels															
		Low				Moderate				High							
		n (%)	M R	X ²	P	n (%)	M R	X ²	p	n (%)	M R	X ²	p	n	M R	X ²	p
Age Categories	Early (12-14)	3(9.1)	25.83	2.037	.361	7(21.2)	94.21	.547	.761	23(69.7)	142.09		.428	33	269.09	6.556	.038
	Middle (15-17)	11(4.2)	19.18			84(32.1)	83.71			167(63.7)	160.76	1.697		262	269.77		
	Late (18-21)	22(10.2)	17.16			74(34.4)	81.14			119(55.3)	149.41			215	236.02		
Class	Senior One	4(3.1)	17.63	2.650	.449	37(28.2)	97.84	5.665	.129	92(65.2)	147.53	7.260	.064	131	277.79	12.159	.007
	Senior Two	8(5.6)	21.75			46(32.2)	83.39			89(62.2)	153.94			143	260.53		
	Senior Three	9(7.6)	20.89			39(33.1)	77.49			70(59.3)	178.39			118	264.16		
	Senior Five	15(12.7)	15.57			43(36.4)	74.81			60(50.8)	140.50			118	216.00		
Parents/ Guardian's Marital Status	Married	30(7.4)	18.92	2.064	.559	133(32.8)	86.33	4.088	.252	242(59.8)	152.40	1.775	.620	405	252.74	3.255	.354
	Single	3(10.7)	21.83			6(21.4)	56.50			19(67.9)	169.74			28	273.73		
	Widowed	2(3.9)	11.50			20(39.2)	72.43			29(56.9)	153.71			51	244.67		
	Divorced	1(3.8)	10.00			6(23.1)	70.83			19(73.1)	175.37			26	300.08		
Parent's /Guardian's Education	No Education	3(3.7)	30.00	4.573	.206	30(36.6)	75.80	1.906	.592	49(59.8)	188.58	9.207	.027	82	274.80	4.429	.219
	Primary	9(6.4)	16.78			40(28.4)	78.43			92(65.2)	146.74			141	260.43		
	Secondary	12(6.6)	16.71			59(32.6)	87.73			110(60.8)	153.63			181	256.96		
	Tertiary	12(11.3)	18.71			36(34.0)	86.33			58(54.7)	142.33			106	231.52		
	Education																
Parent's /Guardian's Income	0-100,000	2(4.8)	19.30		.231	10(23.8)	85.06	.675	.713	30(71.4)	153.67	1.062	.588	42	271.71	11.024	.004
	100,001 – 250,000	16(5.5)	21.41	2.929		90(30.8)	80.89			186(63.7)	147.90			292	221.35		
	250,0001 – 500,000	8(8.2)	14.10			40(40.8)	77.67			50(51.0)	165.39			98	237.63		
	Income																

(Continued)

Table 4.12: Cognitive Engagement and Demographic Characteristics of Participants (continued)

Demographic Characteristics		Mann-Whitney U Test															
		Cognitive Engagement Levels												Total			
		Low				Moderate				High							
		n (%)	M R	U	P	n (%)	M R	U	p	n (%)	M R	U	p	n	M R	U	n (%)
Gender of Participants	Male	20(8.7)	22.55	79.000	.010	82(35.5)	81.45	3275.5	.677	129(55.8)	150.67	11052	.470	231	247.28	30325	.251
	Female	16(5.7)	13.44			83(29.7)	84.54			180(64.5)	158.10			279	262.31		
Compassion International support Beneficiaries	Non-beneficiary	30(9.3)	17.98	74.500	.509	109(33.9)	82.43	2989.5	.829	183(56.8)	145.65			322	241.01		
	Beneficiary	6(3.2)	21.08			56(29.8)	84.12			126(67.0)	168.58			188	280.31		
School Type	Private	26(7.9)	17.21	96.500	.235	105(31.8)	81.88	3032	.689	199(60.3)	149.98	9947	.183	330	247.04	26908	.079
	Government	10(5.6)	21.85			60(33.3)	84.97			110(61.1)	164.07			180	271.01		
Total		36(7.1)				165(32.4)				309(60.6)				510			

Note. MR = Mean Rank, Low level = 1- 1.33, Moderate = 2.34-3.66, High = 3.67-5.0, the values in bold indicate significant effect of demographics on cognitive engagement

Results in Table 4.12 indicate that there was a statistically significant effect of age ($X^2 = 6.556, p = .038$) on total cognitive engagement with middle and early adolescents having higher mean ranks (MR= 269.77) and (MR= 269.09) than late adolescents. Results further indicate a moderate statistically significant difference ($X^2 = 7.260, p = .068$) in class at a high level of cognitive engagement and statistically significant difference for total cognitive engagement ($X^2 = 12.159, p = .007$) whereby students in senior three and one respectively had higher mean ranks than those in senior two and five respectively (Table 4.12). Results further indicate that there was a statistically significant effect of parental/guardian education ($X^2 = 9.207, p < .027$) on high cognitive engagement with uneducated parents/guardians having higher mean rank than those who attained secondary, primary and tertiary education levels, respectively (Table 4.12).

Results further indicate a statistically significant effect of parental/guardian income on total cognitive engagement ($X^2 = 11.024, p = .004$), whereby parents whose level of income was at 0-100,000 had a higher mean rank (MR = 271.71) than those who earned 250001 to 500000 (MR = 237.63) and 100001-250000 (MR = 271.71) Ugandan shillings. Results further indicate a significant effect of gender ($U = 79.000, p = .010$) on low cognitive engagement where by males had a higher mean rank (MR = 22.55) than females (MR = 13.44). Furthermore, results further indicate a significant effect of receiving Compassion International support on high cognitive engagement ($U = 9818.5, p = .026$) and total cognitive engagement ($U = 241.01, p = .004$) where by beneficiaries had higher mean ranks than non-beneficiaries (Table 4.12).

The study results imply that while age influences total cognitive engagement, students' class had an influence both at a high level and total cognitive engagement with senior five students having the lowest cognitive engagement levels. Results further imply that while at high level of cognitive engagement, parental/guardian education influences cognitive engagement, parental/guardian income influences total cognitive engagement.

Finally, at a low level, gender influences cognitive engagement while Compassion International support influences total cognitive engagement even at its high level. However, there was no statistically significant difference in participants' school type and their parental/guardian marital status at low, moderate and high cognitive engagement levels. This implies that irrespective of their school type and parental/guardian marital status, students have varying cognitive engagement levels. The proportions of differences in students' cognitive engagement levels are not statistically significant.

Table 4.13: Agentic Engagement Levels and Demographic Characteristics of the Study Participants

Demographic Characteristics		Kruskal Wallis Test												Total			
		Agentic Engagement Levels															
		Low				Moderate				High							
		n (%)	M R	X ²	P	n (%)	M R	X ²	P	n (%)	M R	X ²	p	n	M R	X ²	p
Age Categories	Early (12-14)	5(15.2)	17.10	2.296	.317	15(45.5)	114.60	3.798	.150	13(39.4)	113.12	.237	.888	33	228.85	3.997	.136
	Middle (15-17)	21(8.0)	26.98			111(42.4)	116.18			130(49.6)	122.42			262	267.63		
	Late (18-21)	26(12.1)	27.92			91(42.3)	99.32			98(45.6)	120.16			215	244.81		
Participants Class	Senior One	7(5.3)	20.43	1.416	.702	52(39.7)	120.52	8.418	.038	72(55.0)	123.08	.427	.935	131	285.06	9.504	.023
	Senior Two	16(11.2)	27.94			63(44.1)	117.89			64(44.8)	118.16			143	251.24		
	Senior Three	12(10.2)	26.75			47(39.8)	88.31			59(50.0)	124.31			11	255.26		
	Senior Five	17(14.4)	27.47			55(46.6)	105.61			46(39.0)	117.47			118	228.08		
Parents/Guardian's Marital Status	Married	40(9.9)	25.20	4.147	.246	171(42.2)	110.99	1.403	.705	194(47.9)	119.43	1.178	.758	405	257.37		.783
	Single	5(17.9)	26.80			9(32.1)	99.67			14(50.0)	137.32			28	256.70	1.077	
	Widowed	3(5.9)	43.17			26(51.0)	107.06			22(43.1)	127.68			51	254.75		
	Divorced	4(15.4)	26.63			11(42.3)	90.23			11(42.3)	114.50			26	226.52		
Parent's/Guardian's Education Level	No Education	5(6.1)	30.80	1.423	.700	31(37.8)	92.21	4.258	.235	46(56.1)	137.12	4.691	.196	82	284.22	6.669	.083
	Primary	13(9.2)	29.27			63(44.7)	118.15			65(46.1)	122.38			141	259.15		
	Secondary	20(11.0)	25.45			75(41.4)	112.13			86(47.5)	119.09			181	255.22		
	Tertiary Education	14(13.2)	23.89			48(45.3)	102.95			44(41.5)	105.84			106	228.92		
Parent's/Guardian's Income	0-100,000	4(9.5)	27.48	4.651	.098	13(31.0)	114.71	3.009	.222	25(59.5)	129.65	8.960	.011	42	275.89	16.629	< .01
	100,001 – 250,000	22(7.5)	30.68			121(41.4)	104.08			149(51.0)	102.00			292	215.75		
	250,0001 – 500,000	17(17.3)	17.90			45(45.9)	96.52			36(36.7)	100.27			98	229.91		

(Continued)

Table 4.13: Agentic Engagement Levels and Demographic Characteristics of the Study Participants (continued)

Demographic Characteristics		Mann-Whitney U Test												Total			
		Agentic Engagement Levels															
		Low			Moderate			High									
		n (%)	MR	U	p	n (%)	MR	U	p	n (%)	MR	U	p	n	MR	U	n (%)
Gender of Participants	Male	28(12.1)	28.57	278.0	.274	96(41.6)	108.14	5725	.855	107(46.3)	115.23	6552	.248	231	247.99	30490	.294
	Female	24(8.6)	24.08			121(43.4)	109.69			134(48.0)	125.60			279	261.72		
Compassion International support	Non-beneficiary	36(11.2)	26.28	.027	.780	149(46.3)	102.87	4.615	.032	137(42.5)	111.82	5.576	.018	322	236.63	24190	<.01
	Beneficiary	16(8.5)	27.00			68(36.2)	122.44			104(55.3)	133.09			188	287.83		
School Type	Private	38(11.5)	26.93	249.5	.726	146(44.2)	100.67	3967.5	.005	146(44.2)	113.03	5771.5	.027	330	79090	24475	.001
	Government	14(7.8)	25.32			71(39.4)	126.12			95(52.8)	133.25			180	51214		
Total		52(10.2)			217(42.5)			241(47.3)			510						

Note. MR = Mean Rank, Low level = 1- 1.33, Moderate = 2.34-3.66, High = 3.67-5.0, the values in bold indicate significant effect of demographics on Agentic Engagement

Results in Table 4.13 indicate that there was a statistically significant effect of class ($X^2 = 8.418, p = .038$) on high level of agentic engagement and total agentic engagement ($X^2 = 9.504, p = .023$) whereby students in senior one had higher mean ranks than those in senior two, three and five respectively (Table 4.13). Results further indicate a statistically significant effect of parental/guardian income on total agentic engagement ($X^2 = 16.629, p < .01$), whereby parents whose level of income was at 0-100,000 had a higher mean rank (MR = 275.89) than those who earned 250001 to 500000 (MR = 229.91) and 100001-250000 (MR = 215.75) Ugandan shillings.

Results further indicate a significant effect of receiving Compassion International support on moderate agentic engagement ($U = 4.615, p = .032$), high ($U = 5.576, p = .018$) and total agentic engagement ($U = 24190, p < .01$) where by beneficiaries had higher mean ranks than non-beneficiaries (Table 4.13). Results further indicate a significant effect of school type on moderate agentic engagement ($U = 3967.5, p = .005$), high level ($U = 5771.5, p = .027$) and total agentic engagement ($U = 24475, p = .001$) with government schools having higher mean ranks, than private schools (Table 4.13). The study results imply that while class and parental/guardian income influence total agentic engagement, at a moderate, high level and total agentic engagement, Compassion International support and school type does not influence agentic engagement.

However, there was no statistically significant difference in participants' age, gender, their parental/guardian marital status and income at low, moderate and high agentic engagement levels. This implies that irrespective of their age, gender, parental/guardian marital status and income, students have varying agentic engagement levels. This means that the proportions of differences in students' agentic engagement levels are not statistically significant.

4.4 Diagnostic Tests to Determine the Mediation Effect of Self-Efficacy on the Relationship between Achievement Goal Orientation and Academic Engagement

In order to investigate the mediation effect of self-efficacy on the relationship between achievement goal orientation and academic engagement, diagnostic tests were done to ensure that data fits the model. These included, normality testing, linearity, collinearity, and multi collinearity. In addition to the aforementioned diagnostic cheques, Pearson product moment correlation coefficient was done to determine whether there were statistically significant associations between study variables.

4.4.1 Normality Test Results

This study employed Kolmogorov-Smirnov test for normality to examine whether the distribution in the data used in this investigation deviated from a comparable normal distribution.

Table 4.14: Normality and Homogeneity of Variance

	Descriptive Statistics					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Overall Self-Efficacy	.060	510	.000	.994	510	.031
Overall academic engagement	.053	510	.002	.983	510	.000
Mastery Approach Goals	.204	510	.000	.864	510	.000
Performance Approach Goals	.170	510	.000	.893	510	.000
Mastery Avoidance Goals	.103	510	.000	.964	510	.000
Performance Avoidance Goals	.171	510	.000	.906	510	.000
Social Self-Efficacy	.068	510	.000	.991	510	.003
Academic Self-Efficacy	.072	510	.000	.984	510	.000
Emotional Self-Efficacy	.062	510	.000	.987	510	.000
Behavioral Engagement	.132	510	.000	.930	510	.000
Emotional Engagement	.113	510	.000	.965	510	.000
Cognitive Engagement	.116	510	.000	.954	510	.000
Agentic Engagement	.078	510	.000	.974	510	.000
Valid N (listwise)						

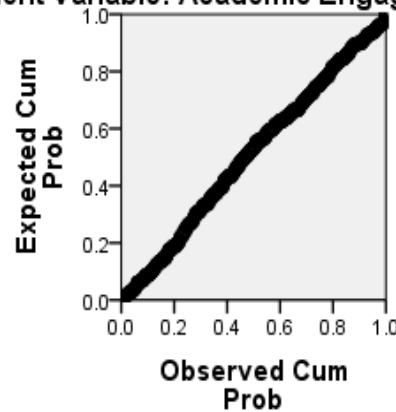
Results in Table 4.14 indicate that the sample distribution is statistically different from a normal distribution since they are significant ($P < .05$). Therefore, further checks were done using probability plot (P-P plot).

A P-P plot for Achievement Goal Orientation, Self-efficacy and Academic Engagement

Results for normality test using P-P Plots with Achievement goal orientation, Self-efficacy and academic engagement indicate that data were relatively normal since the points were distributed along the diagonal line (Figures 4.1 to 4.4). Therefore, the data met the conditions for running regression analysis using PROCESS macro for SPSS version 4.2 (Hayes & Rockwood, 2020).

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Academic Engagement

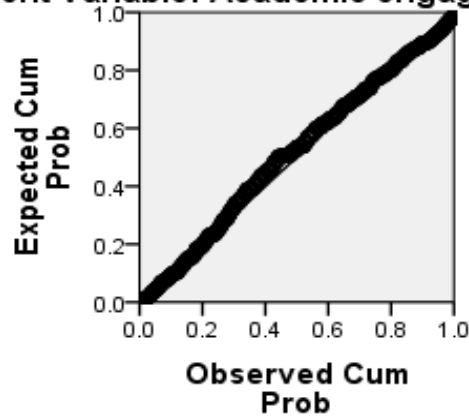


Note. Prob = probability, Cum = cumulative

Figure 4.1: P-P Plot of Regression Standardised Residual for Mastery Approach Achievement Goal Orientation, Self-Efficacy and Academic Engagement

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Academic engagement

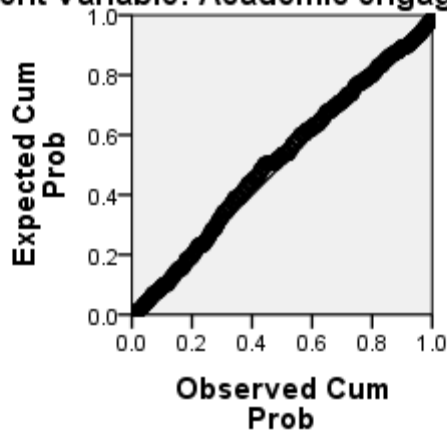


Note. Prob = probability, Cum = cumulative

Figure 4.2: P-P Plot of Regression Standardised Residual for Performance Approach Achievement Goal Orientation, Self-Efficacy and Academic Engagement

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Academic engagement

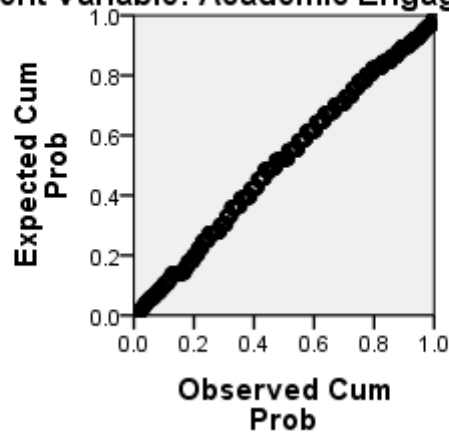


Note. Prob = probability, Cum = cumulative

Figure 4.3: P-P Plot of Regression Standardised Residual for Mastery Avoidance Achievement Goal Orientation, Self-Efficacy and Academic Engagement

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Academic Engagement



Note. Prob = probability, Cum = cumulative

Figure 4.4: Plot of Regression Standardised Residual for Performance Avoidance Achievement Goal Orientation, Self-Efficacy and Academic Engagement

The Normal P-P plots in Figures 4.1 to 4.4 show that data used in this study was normal because most of the dots lied along the straight line even though slight deviations were displayed. Therefore, the data was deemed fit for further statistical analyses because the assumptions of normality using normal P-P plots was realized and justifiable.

4.4.2 Linearity with Skewness and Kurtosis

As one of the conditions for mediation analysis, linearity using Skewness and Kurtosis was done to measure the degree of asymmetry of the distribution as presented in Table 4.15.

Table 4.15: Linearity with Skewness and Kurtosis

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Overall Self-Efficacy	510	1.76	5.00	3.3547	.52659	.229	.108	.045	.216
Overall Academic engagement	510	1.10	5.00	3.7235	.60390	-.500	.108	.413	.216
Mastery Approach Goals	510	1.00	5.00	3.9650	.86424	-1.371	.108	1.770	.216
Performance Approach Goals	510	1.00	5.00	3.9673	.84399	-1.158	.108	1.210	.216
Mastery Avoidance Goals	510	1.00	5.00	3.1288	1.09122	-.184	.108	-.890	.216
Performance Avoidance Goals	510	1.00	5.00	3.9379	.90444	-.966	.108	.495	.216
Social Self-Efficacy	510	1.86	5.00	3.4154	.62146	.029	.108	-.369	.216
Academic Self-Efficacy	510	1.43	5.00	3.6182	.69434	-.281	.108	-.302	.216
Emotional Self-Efficacy	510	1.29	5.00	3.0305	.72919	.217	.108	-.436	.216
Behavioral Engagement	510	1.00	5.00	4.0133	.70148	-1.029	.108	1.481	.216
Emotional Engagement	510	1.00	5.00	3.7094	.68715	-.690	.108	.716	.216
Cognitive Engagement	510	1.25	5.00	3.7319	.82510	-.625	.108	-.156	.216
Agentic Engagement	510	1.00	5.00	3.5218	.85028	-.458	.108	-.282	.216
Valid N (listwise)	510								

Results in Table 4.15 indicate that most variables of this study have skewness values between -1 and +1 and kurtosis values between -2 and +2 indicating a moderate symmetrical distribution. This implied that the distribution of the data had a strong emphasis on the central values, making it neither excessively peaked nor very flat, thus relatively close to a normal distribution. Skewness values between -1 and +1 and kurtosis values between -2 and +2 are considered

acceptable for most purposes (George & Mallery, 2016; Orcan, 2020). The linearity requirements for this study were met.

4.4.3 Multi-collinearity

A test to measure multi-collinearity was conducted to confirm whether independent variables could independently predict the dependent variable. Results were presented in Table 16.

Table 4.16: Multi-collinearity

Model	Collinearity Statistics	
	Tolerance	VIF
Self Efficacy	.808	1.238
Mastery Approach Goal Orientation	.693	1.443
Performance Approach Goal Orientation	.679	1.473
Mastery Avoidance Goal Orientation	.899	1.113
Performance Avoidance Goal Orientation	.799	1.252

Results in Table 4.16 show that there was no Collinearity (high correlation) between the independent variables because values for Variance Inflation Factor (VIF), the standard metric for measuring collinearity, were above 0.5 with Self-Efficacy SE (1.238), Mastery Approach Goal Orientation MAP (1.44), Performance Approach Goal Orientation PAP (1.47), Mastery Avoidance Goal Orientation MAV (1.11) and Performance Avoidance Goal Orientation PAV (1.45). This meant that the independent variables could independently predict the dependent variable (Hair et al. 2021).

In addition to the diagnostic tests aforementioned, Baron and Kenny's (1986) suggestion of a three-variable system in mediation analysis interconnected by paths designated as a, b, and c was followed.

For self-efficacy to qualify as a mediator variable, it adhered to the following criteria: 1. Variations in the Achievement goal orientation variable significantly contributed to variations in self-efficacy (path a). 2. Variations in the self-efficacy significantly influence variations in the academic engagement (path b). 3. When both paths a and b were controlled, the previously established significant relationship between the achievement goal orientation and academic engagement diminished, with path c either reduced (whether it remains significant or becomes non-significant). A reduction of path c to zero would indicate that self-efficacy is the only mediator variable but this was not the case for all models.

4.4.4 Pearson Product-Moment Correlation Coefficients for Achievement

Goal Orientation and Self-Efficacy as a Condition for Regression Analysis

To satisfy regression analysis requirements, significant correlations between the study variables are essential. Pearson product moment correlations between achievement goal orientation and self-efficacy; self-efficacy and academic engagement; Achievement goal orientation and academic engagement were calculated. The correlation analysis results for this study variables were statistically significant. The significant Pearson product-moment correlation between study variables suggests a linear association, which provided a basis for exploring potential mediation relationships in subsequent analysis. The findings are presented in Tables 4.17 to 4.19.

Table 4.17: Pearson Product-Moment Correlation Coefficients for Achievement Goal Orientation and Self-Efficacy

	M	Std	1	2	3	4	5	6	7
1. Mastery Approach Achievement Goal Orientation	3.9650	.864							
2. Performance Approach Achievement Goal Orientation	3.9673	.844	.502**						
3. Mastery Avoidance Achievement Goal Orientation	3.1288	1.091	.209**	.201**					
4. Performance Avoidance Achievement Goal Orientation	3.9379	.904	.325**	.389**	.208**				
5. Overall Self-efficacy	3.3547	.526	.346**	.308**	.267**	.283**			
6. Social Self - Efficacy	3.4154	.621	.289**	.260**	.244**	.275**	.784**		
7. Academic self-Efficacy	3.6182	.694	.286**	.260**	.102*	.198**	.740**	.381**	
8. Emotional Self – Efficacy	3.0305	.729	.231**	.199**	.273**	.191**	.794**	.483**	.325**

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

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

Results in Table 4.17 indicate that there is a significant positive correlation between Achievement goal orientation and overall self-efficacy. Specifically, adolescents with highest self-efficacy are associated with adoption of mastery approach ($r = .346^{**}$, $p < .01$), followed by performance approach ($r = .308^{**}$, $p < 0.01$). Results further demonstrate a weak positive correlation between mastery avoidance and overall self-efficacy ($r = .267^{**}$, $p < .01$), and performance avoidance and overall self-efficacy ($r = .283^{**}$, $p < 0.01$).

These results imply that adoption of a particular achievement goal type has a significant effect on an individual's overall self-efficacy level among adolescents in Kabale district, Southwestern Uganda. Results further demonstrate that achievement goal orientation sub-constructs were positively correlated with self-efficacy sub-constructs. There was a moderate positive correlation between social self-efficacy and mastery approach goal orientation ($r = .289^{**}$, $p < .01$), social self-efficacy and performance approach goal orientation ($r = .260^{**}$, $p < .01$), social self-efficacy and mastery avoidance ($r = .244^{**}$, $p < .01$) and social self-efficacy and performance avoidance ($r = .275^{**}$, $p < .01$). There was a moderate positive correlation between academic self-efficacy and mastery approach goal orientation ($r = .286^{**}$, $p < .01$), academic self-efficacy and performance approach goal achievement orientation ($r = .260^{**}$, $p < .01$), a very weak correlation between academic self-efficacy and performance avoidance goal orientation ($r = .102^*$, $p = 0.05$) and academic self-efficacy and for mastery avoidance goal orientation ($r = .198^{**}$, $p = 0.05$). There was a moderate positive correlation between emotional self-efficacy and mastery approach goal orientation ($r = .231^{**}$, $p < .01$), a very weak correlation between emotional self-efficacy and performance approach goal orientation ($r = .199^{**}$, $p < 0.01$) and emotional self-efficacy and performance avoidance achievement goal orientation ($r = .191^{**}$, $p < .01$). Mastery avoidance goal were moderately correlated with emotional self-efficacy ($r = .273^{**}$, $p < .01$). These results indicate that an adoption of an achievement goal orientation resulted in an increase in self-efficacy sub-construct differently.

While adoption of approach achievement goal orientation (mastery and performance) resulted in a moderate increase in academic self-efficacy,

avoidance achievement goal orientation (mastery and performance) to a very weak increase in academic self-efficacy. Performance approach achievement goal orientation and avoidance goal orientation (mastery and avoidance) lead to a very weak increase in emotional self-efficacy. This implies that an increase in avoidance achievement goal orientation (mastery and performance) may lead to slight increase in emotional self-efficacy. This may be explained by the fact that an individual who adopts avoidance achievement goal orientation is likely to be anxious about academic failure and being branded as non-competent or weak student which can consequently result in low emotional regulation within a learning context.

4.4.5 Self-efficacy and Academic Engagement

To determine whether there was a relationship between achievement goals and self-efficacy, a Pearson product-moment correlation coefficient was conducted. Correlation coefficients results for self-efficacy level and academic engagement are presented in Table 4.18.

Table 4.18: Pearson product-moment Correlation Coefficients for Self-Efficacy and Academic Engagement

	M	Std	1	2	3	4	5	6	7	8
1. Social self-efficacy	3.415	.621								
2. Academic self-efficacy	3.618	.694	.381**							
3. Emotional self-efficacy	3.031	.729	.483**	.325**						
4. Overall Self-efficacy	3.355	.527	.784**	.740**	.794**					
5. Behavioral Engagement	4.013	.701	.369**	.498**	.240**	.475**				
6. Emotional Engagement	3.709	.687	.362**	.395**	.276**	.443**	.513**			
7. Cognitive Engagement	3.732	.825	.334**	.414**	.338**	.469**	.453**	.440**		
8. Agentic Engagement	3.522	.850	.337**	.468**	.270**	.463**	.530**	.414**	.471**	
9. Overall Academic Engagement	3.724	.604	.445**	.572**	.356**	.591**	.782**	.722**	.726**	.851**

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

Results in Table 4.18 indicate a strong significant positive correlation between overall self-efficacy and overall academic engagement ($r = .591^{**}$, $p < .01$). Specifically, adolescents with high self-efficacy have high behavioral engagement ($r = .475^{**}$, $p < .01$), self-efficacy and cognitive engagement ($r = .469^{**}$, $p < .01$) and self-efficacy agentic engagement ($r = .463^{**}$, $p < .01$). Results further indicate a moderate positive correlation between self-efficacy and emotional engagement ($r = .443^{**}$, $p < .01$).

Results further indicate significant positive correlation between self-efficacy sub-constructs and academic engagement whereby academic self-efficacy was strongly correlated with academic engagement ($r = .572^{**}$, $p < .01$) followed by a moderate correlation between social self-efficacy and academic engagement ($r = .445^{**}$, $p < .01$) and emotional self-efficacy and academic engagement ($r = .356^{**}$, $p < .01$). This implies that interventions

geared towards academic engagement enhancement should consider building students, self-efficacy.

4.4.6 Achievement Goal Orientation and Academic

To determine the relationship between achievement goal orientation and academic engagement, a Pearson product-moment correlation coefficient was done.

Table 4.19: Pearson Product-Moment Correlation Coefficients for Achievement Goal Orientation and Academic Engagement

	M	Std	1	2	3	4	5	6	7	8
1. Mastery Approach Achievement Goal Orientation	3.9650	.86424								
2. Performance Approach Achievement Goal Orientation	3.9673	.84399	.502**							
3. Mastery Avoidance Achievement Goal Orientation	3.1288	1.09122	.209**	.201**						
4. Performance Approach Achievement Goal Orientation	3.9379	.90444	.325**	.389**	.208**					
5. Overall Academic Engagement	3.7235	.60390	.367**	.305**	.185**	.221**				
6. Behavioral Engagement	4.0133	.70148	.339**	.271**	.164**	.220**	.782**			
7. Emotional Engagement	3.7094	.68715	.289**	.291**	.141**	.218**	.722**	.513**		
8. Cognitive Engagement	3.7319	.82510	.274**	.191**	.219**	.141**	.726**	.453**	.440**	
9. Agentic Engagement	3.5218	.85028	.264**	.215**	.094*	.136**	.851**	.530**	.414**	.471**

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

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

Results in Table 4.19 demonstrate that adoption of an achievement goal orientation type correlates with an individual's academic level of engagement to differing degrees. More specifically, academic engagement was moderately positive correlated with mastery approach goal orientation ($r = .367^{**}$, $p < .01$), weakly positively correlated with performance approach goal orientation ($r = .305^{**}$, $p < .01$), mastery avoidance goal orientation ($r = .185^{**}$, $p < .01$) and performance avoidance ($r = .221^{**}$, $p < .01$).

The final requisite for the substantiation of significant mediation was when a zero value is not included in the bootstrap confidence interval. The application of mediation analysis was conducted utilizing Hayes Process Macro version 4.2 (Newsom, 2023), selected for its resilience against the influence of outliers and non-normality inherent in the dataset. The selection of this method aligns with its robustness, as demonstrated by the observation that, in 95% of instances, the 95% confidence intervals encompass the true parameter value. It is consequently presumed that the sampled data, employed for estimating the population effect is representative of the 95% that accurately reflects the veritable value. Given that a coefficient of $b = 0$ implies a lack of effect, the exclusion of zero from the confidence interval suggests the likely presence of a genuine indirect effect. This study employed the bootstrap approach instead of the Sobel test, (1986) to assess self-efficacy as a mediator between achievement goal orientation and academic engagement since the bootstrap method is more appropriate for examining the mediation effect (Alfons et al., 2022; Chen & Fritz, 2022). A bias-Corrected 95% confidence interval with zero omitted from 5000 sample bootstraps indicated that the mediation effect was significant.

4.7 The Mediation Effect of Self-Efficacy on the Relationship between Achievement Goal Orientation and Academic Engagement

To examine self-efficacy as a potential mediator between achievement goal orientation and academic engagement, regression analysis using bootstraps was done. The mediation effect of overall self-efficacy on the relationship between achievement goal orientation dimensions (mastery approach, performance approach, performance avoidance) and overall academic engagement resulted in four models;

- i) *Self-efficacy mediates the relationship between mastery approach achievement goal orientation and academic engagement*
- ii) *Self-efficacy mediates the relationship between performance approach achievement goal orientation and academic engagement*
- iii) *Self-efficacy mediates the relationship between mastery avoidance achievement goal orientation and academic engagement*
- iv) *Self-efficacy mediates the relationship between performance avoidance achievement goal orientation and academic engagement.*

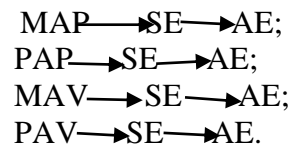


Table 4.20: The Mediation Effect of Self-Efficacy on the Relationship between Mastery Approach Goal Orientation and Academic Engagement

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SE	MAP	0.21	8.31	<.01	0.35	.12	69.10	0.03	0.16	0.26
2	AE	MAP	0.13	4.95	<.01	0.62	.38	154.8	0.03	.08	0.18
		SE	0.60	14.13	<.01				0.04	0.52	0.69
3	AE	MAP	0.26	8.89	= .002	0.37	.013	79.12	0.03	0.21	0.31
4	a*b		0.13							0.09	0.17

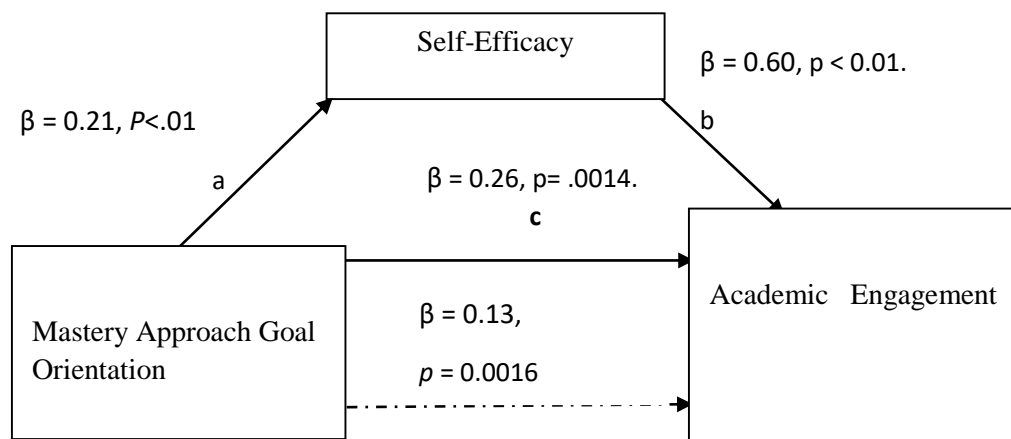


Figure 4.5 The Mediation Effect of Self-Efficacy on the Relationship between Mastery Approach Goal Orientation and Academic Engagement

The study results in Table 4.20 and figure 4.5 shows the mediation effect of self-efficacy on the relationship between mastery approach goal orientation and academic engagement. Model 1 was conducted to determine the effect of self-efficacy on the relationship between mastery approach goal orientation and academic engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. Path a of regressing self-efficacy on MAP was statistically significant ($\beta = .21, t = 8.31 P < .01$) with $R^2 = 0.120$, which implies that MAP explained 12% variance in self-efficacy. The regression coefficient indicated that MAP significantly predict self-efficacy. So, adoption of MAP resulted in high academic efficacy among adolescent students in Kabale district, Southwestern Uganda.

Model 2 shows the results of the regression of academic engagement predicted by both mastery approach goal orientation and self-efficacy. When self-efficacy is introduced in the model, mastery approach achievement goal orientation significantly predicts academic engagement in the model (Paths c'),

($\beta = 0.13$, $t = 4.95$, $P < .01$) and self-efficacy significantly predicts academic engagement, (path b), ($\beta = .60$, $t = 14.12$, $p < .01$) with $R^2 = 0.380$.

Model 2 shows the total effect of the MAP on the academic engagement when self-efficacy is present in the model. The R^2 value indicates that the model explains 38% of the variance in academic engagement. The results of this study indicate that mastery approach achievement goal positively influence academic engagement even when self-efficacy is introduced to the model. This means that when an adolescent student with high self-efficacy adopts mastery approach achievement goal there is 38% increase in their academic engagement level. So, enhancing self-efficacy and mastery approach achievement goal orientation is critical in increasing academic engagement among adolescent students in Kabale district, Uganda.

Model 3 was conducted to determine the effect of mastery approach goal orientation on academic engagement when self-efficacy is not included in the model. When self-efficacy is not in the model, mastery approach goal orientation significantly predicts academic engagement (path c), $\beta = 0.26$, $t = 8.86$, $p < .01$. The R^2 value indicates that mastery approach goal orientation explains 13.5% of the variance in academic engagement. The beta coefficients for MAP in paths c and c' are different, with the latter value being lower. This implies that when self-efficacy is added in the model, the effect of mastery approach goal orientation on academic engagement increases with increase in explanation of variance in the academic engagement from 14% to 38%. The indirect effect ($a*b$) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.09, 0.17). Therefore, self-efficacy mediates mastery approach goal orientation and academic engagement. This

means that while mastery achievement goal orientation adoption results in high academic engagement directly, self-efficacy increases the effect.

Table 4.21: The Mediation Effect of Self-Efficacy on the Relationship between Performance Approach Goal Orientation and Academic Engagement

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SE	PAP	0.19	7.31	<.01	0.31	.11	53.40	0.04	0.14	0.24
2	AE	PAP	0.10	3.64	=	0.62	.38	146.10	0.03	.04	0.15
		SE	0.63	14.77	<.01						
3	AE	PAP	0.22	7.21	<.01	0.30	.093	51.96	0.03	0.16	0.28
4	a*b		0.12							0.09	0.16

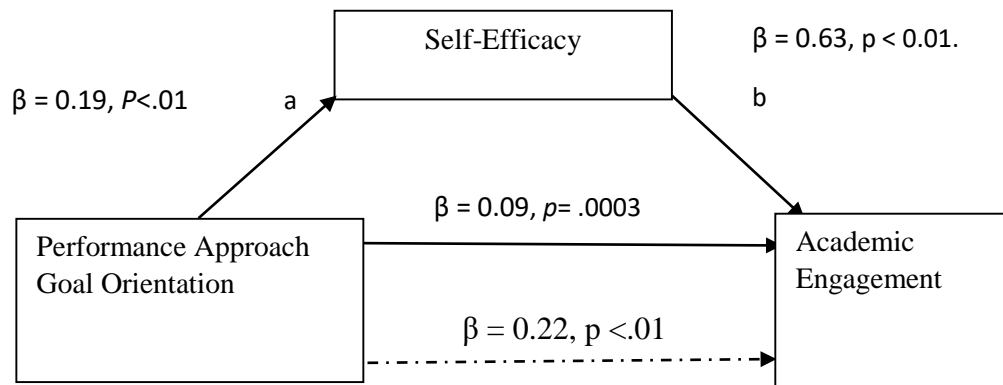


Figure 4.6 The Mediation Effect of Self-Efficacy on the Relationship between Performance Approach Goal Orientation and Academic Engagement

The study results in Table 4.21 Figure 4.6 shows the mediation effect of self-efficacy on the relationship between performance approach goal orientation and academic engagement. Model 1 was conducted to determine the regression effect of self-efficacy on the relationship between performance approach goal orientation and academic engagement. Path a of regressing self-efficacy on PAP was statistically significant (path a), ($\beta = .19, t = 7.30, P < .01$) with $R^2 = 0.095$,

which implies that PAP explained 9.5% variance in self-efficacy. The regression coefficient indicated that PAP significantly predicts self-efficacy.

Model 2 shows that the results of the regression of academic engagement is predicted by both performance approach goal orientation and self-efficacy. When self-efficacy is introduced in the model, performance approach goal orientation significantly predicts academic engagement in the model (Paths c'), $\beta = 0.97$, $t = 3.63$, $P = .0003$ and self-efficacy significantly predicts academic engagement, (path b), ($\beta = .63$, $t = 14.77$, $p < .01$) with $R^2 = 0.370$. Model 2 shows the total effect of the PAP on the academic engagement when the emotional self -efficacy is present in the model. The R^2 value indicates that the model explains 37% of the variance in academic engagement. The results indicate that both performance approach goal orientation and self-efficacy are significant predictors of academic engagement, and together they explain a substantial portion of the variability in academic engagement (37%). However, performance approach goal orientation alone explains 9.3% variability in academic engagement. This implies that self-efficacy plays a critical role in boasting the impact of performance approach achievement goal orientation on academic engagement.

Model 3 was conducted to determine the effect of performance approach goal orientation on academic engagement when self-efficacy is not included in the model. When self-efficacy is not in the model, performance approach goal orientation significantly predicts academic engagement (path c), ($\beta = 0.22$, $t = 7.20$, $p < .01$). The R^2 value indicates that performance approach goal orientation explains 9.3% of the variance in academic engagement. The beta

coefficients for PAP in paths c and c' are different, with the latter value being higher.

This implies that when self-efficacy is added in the model, the effect of performance approach goal orientation on academic engagement increases while explanation of variance in the academic engagement increases from 9.3% to 37.0%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.09, 0.16). Therefore, self-efficacy partially mediates performance approach goal orientation and academic engagement. This implies that much as self-efficacy increases the effect of performance approach achievement goal orientation on academic engagement, there are other factors that could influence the relationship.

Table 4.22 The Mediation Effect of Self-Efficacy (SE) on the Relationship between Mastery Avoidance Goal Orientation (MAV) and Academic Engagement (AE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SE	MAV	0.13	6.24	<.01	0.27	.071	38.95	0.02	0.09	0.17
2	AE	MAV	0.02	3.64	= .43	0.59	.35	136.41	0.02	-.02	0.06
		SE	0.67	14.77	<.01				0.04	0.58	0.75
3	AE	MAV	0.10	4.24	<.01	0.18	.034	17.96	0.02	0.05	0.15
4	a*b		0.12							0.06	0.12

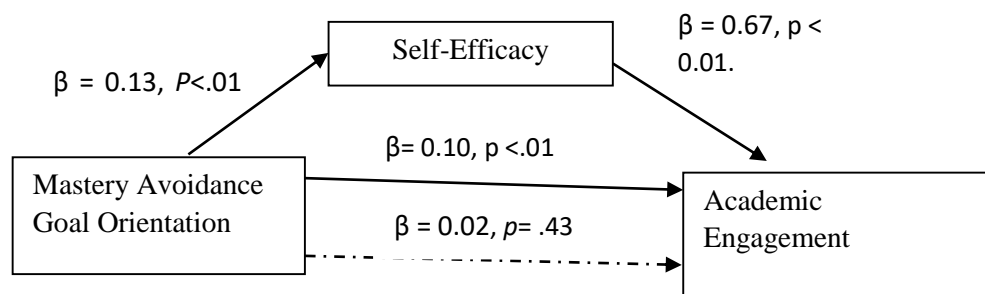


Figure 4.7 The Mediation Effect of Self-Efficacy (SE) on the Relationship between Mastery Avoidance Goal Orientation (MAV) and Academic Engagement (AE)

The study results in Table 4.22 and Figure 4.7 presents the mediation effect of self-efficacy on the relationship between mastery avoidance goal orientation and academic engagement. Model 1 was conducted to determine the regression effect of mastery avoidance goal orientation on academic engagement. Path a of regressing overall self-efficacy on MAV was statistically significant (path a), ($\beta = .13$, $t = 6.24$ $P < .01$) with $R^2 = 0.071$, which implies that MAV explained 7.1% variance in self-efficacy. This means that adoption of mastery avoidance goals influences self-efficacy among adolescent students. Model 2 shows that the results of the regression of academic engagement were predicted by mastery avoidance goal orientation when overall self-efficacy is introduced in the model.

Results in model 2 indicate that mastery avoidance goal orientation did not significantly predict academic engagement (Paths c'), $\beta = 0.016$, $t = 0.79$, $P = .43$ but self-efficacy significantly predicts academic engagement, $\beta = .67$, $t = 15.69$, $p < .01$ with $R^2 = 0.350$. Model 2 shows the total effect of the MAV on the academic engagement when the self-efficacy is present in the model. The R^2 value indicates that the model explains 35% of the variance in academic engagement. The results suggest that mastery avoidance goal orientation does

not significantly predict academic engagement when self-efficacy is considered. However, mastery avoidance goal orientation indirectly plays a significant role in predicting academic engagement through self-efficacy and it explains 35% of the variability in academic engagement.

Model 3 was conducted to determine the effect of mastery avoidance goal orientation on academic engagement when overall self-efficacy is not included in the model. When overall self-efficacy is not in the model, mastery avoidance goal orientation moderately predicted academic engagement (path b), $\beta = 0.102$, $t = 4.24$, $p < .01$. The R^2 value indicates that mastery avoidance goal orientation explained 3.40% of the variance in academic engagement. The beta coefficients for MAV in paths c and c' are different, with the latter value being lower. This implies that when self-efficacy was added in the model, the effect of mastery avoidance goal orientation on academic engagement increased with increase in explanation of variance in the academic engagement from 3.40% to 35.0%.

The indirect effect ($a*b$) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.06, 0.12). Therefore, self-efficacy fully mediates mastery avoidance goal orientation and academic engagement. This implies that self-efficacy enhancement is a major channel through which academic engagement among adolescents with mastery avoidance goals can be increased.

Table 4.23: The Mediation Effect of Self-Efficacy (SE) on the Relationship between Performance Avoidance Goal Orientation (PAV) and Academic Engagement (AE)

Model	DV	ID/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SE	PAV	0.17	6.66	<.01	0.28	.080	44.39	0.02	0.12	0.21
2	AE	PAV	0.04	1.55	=.12	0.59	.35	137.78	0.02	-.01	0.09
		SE	0.66	15.41	<.01				0.04	0.57	0.74
3	AE	PAV	0.15	5.11	<.01	0.22	.049	25.97	0.02	0.09	0.20
4	a*b		0.11							0.07	0.15

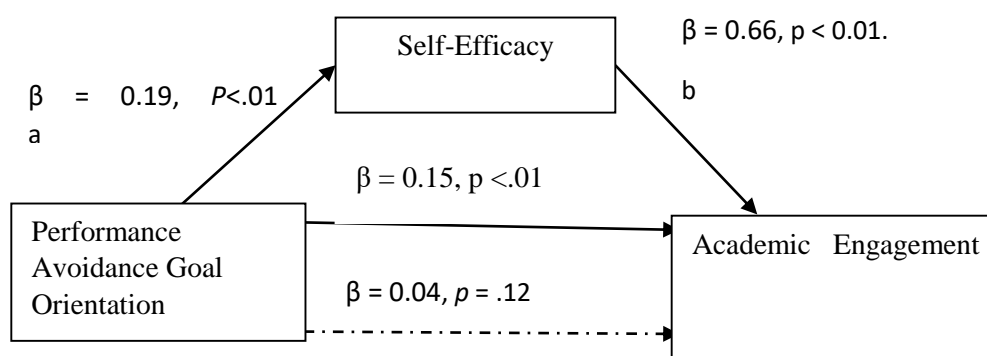


Figure 4.8 The Mediation Effect of Self-Efficacy on the Relationship between Performance Avoidance Goal Orientation and Academic Engagement

The study results in Table 4.23 and Figure 4.8 shows the mediation effect of self-efficacy on the relationship between performance avoidance goal orientation and academic engagement. Model 1 was meant to determine the regression effect of self-efficacy on the relationship between performance avoidance goal orientation and academic engagement. Path a of regressing self-efficacy on PAV was statistically significant (path a), ($\beta = .17$, $t = 6.66$, $P < .01$) with $R^2 = 0.080$, which implies that PAV explained 8.0% variance in self-efficacy. The regression coefficient indicated that PAV significantly predict

self-efficacy. This means that adoption of performance avoidance goals predicted self-efficacy among adolescent students in low socioeconomic status contexts.

Model 2 shows the results of the regression of academic engagement predicted by performance avoidance goal orientation when self-efficacy was introduced in the model. Results indicated that performance avoidance goal orientation does not significantly predict academic engagement in the model (Paths c'), ($\beta = 0.04$, $t = 1.55$, $P = .12$) while self-efficacy significantly predicts academic engagement (path b), ($\beta = 0.66$, $t = 15.41$, $p < .01$) with $R^2 = 0.352$.

The R^2 value indicates that the model explains 35% of the variance in academic engagement. Results of this study suggest that performance avoidance goal orientation does not play a direct significant role in prediction of academic engagement but can indirectly explain 35% variability in academic engagement through self-efficacy. This implies that for adolescents who adopt performance avoidance goals, enhancement of their self-efficacy is a critical aspect that can increase their academic engagement.

Model 3 was conducted to determine the effect of performance avoidance goal orientation on academic engagement when self-efficacy is not included in the model. Results indicate that performance avoidance goal orientation moderately predicts academic engagement (path c), ($\beta = 0.15$, $t = 5.509$, $p < .01$). The R^2 value indicates that performance avoidance goal orientation explains 4.9% of the variance in academic engagement. The beta coefficients for PAV in paths c and c' are different, with the latter value being lower.

This implies that when self-efficacy is added in the model, the effect of performance avoidance goal orientation on academic engagement increases with an increase in explanation of variance in the academic engagement from 4.9% to 35.2%. The indirect effect ($a*b$) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.07, 15). Therefore, self-efficacy fully mediates performance avoidance goal orientation and academic engagement.

4.6 Self-Efficacy Sub-constructs are potential Mediators of the Relationship between Achievement Goal Orientation Types and Academic Engagement Sub-constructs

In order to investigate the mediation effect of self-efficacy sub-constructs on the relationship between achievement goal orientation dimensions and academic engagement sub-constructs, it was hypothesized that self-efficacy (social, emotional and academic) mediates the relationship between achievement goal orientation (mastery approach, performance approach, mastery avoidance and performance avoidance) and academic engagement (behavioral, emotional, cognitive and agentic). For each of the relationships between achievement goal orientations and academic engagement sub-constructs, the mediation effect of each of the three self-efficacy sub-constructs were analyzed and resulted in 48 models (appendix A).

4.6.1 Self-Efficacy (social, emotional and academic) as a Mediator of the Relationship between Mastery Approach Achievement Goal Orientation and Academic Engagement

Results in Tables, A1 to A12 and figure A1 to A12 indicate that self-efficacy (social, emotional and academic) had statistically significant partial mediation effects between mastery approach achievement goal orientation and academic engagement sub-constructs (behavioral, emotional, cognitive and agentic). This resulted in twelve models presented in appendix A.

4.6.2 Self Efficacy (social, emotional, academic) and a Mediator on the Relationship between Performance Approach Achievement Goal Orientation and Academic Engagement

Results indicate that self-efficacy (social, emotional and academic) is a significant moderator between performance approach achievement goal orientation and academic engagement sub-constructs (behavioral, emotional, cognitive and agentic) see Tables and figures A.13 to A.24.

4.6.3 Self Efficacy (social, emotional, academic) and a Mediator on the Relationship between Mastery Avoidance Achievement Goal Orientation and Academic Engagement

Results indicate that there was a significant partial mediation effect of social self-efficacy on the relationship between mastery avoidance achievement goal orientation and academic engagement but not behavioural, emotional and agentic engagement. Results further indicate that while there was a full mediation effect of emotional self-efficacy on the relationship between mastery avoidance achievement goal orientation and emotional and agentic engagement, it partially mediated PAP and behavioural and academic engagement. Academic

self-efficacy fully mediated the relationship between mastery avoidance goals and academic engagement sub-constructs (behavioural, emotional, cognitive but not agentic), (Tables and figures A25 to A36).

4.6.4 Self Efficacy (social, emotional, academic) as a Mediator on the Relationship between Performance Avoidance Achievement Goal Orientation and Academic Engagement

Results indicate that self-efficacy (social, emotional and academic) is a significant moderator between performance avoidance achievement goal orientation and academic engagement sub-constructs (behavioral, emotional, cognitive but not agentic) (Tables A.37 to A.48 & figures A.37 to A.48).

4.7 Qualitative Analysis: Other Factors that Influence Adolescent Students' Academic Engagement Apart from External Support

This section presents qualitative study findings regarding factors that influence academic engagement among Compassion International support beneficiaries and non-beneficiary adolescent students in Kabale district, Southwestern Uganda. A subset of students who participated in in-depth interviews and other key informants including compassion officers, teachers and director of studies shared their perspectives on a number of factors that influence academic engagement other than external support offered by Compassion International. Narratives are coded as IS/CSB_ compassion beneficiary, IS/NB_ non-beneficiary, IS/KI/NCB_ key informant perspective about non-Compassion International support beneficiary, IS/KI/TR/01_ key informant, teacher, IS/KI/CW_ key informant compassion worker and IS/KI/DOS_ director of studies.

Future Career and Employability came up as another important factor that influences both Compassion International support beneficiaries and non-beneficiaries' academic engagement. As rightly observed from narratives stated below;

'Yes, Compassion International support beneficiaries work hard to master the taught content because they have no parents and come from poor and challenging backgrounds which force them to work hard and achieve their education goals for a better future (IS/KI/NCB/01, adolescent, non-Compassion International support beneficiary).

This is affirmed by a Compassion International support beneficiary who laments that,

'All my school fees are paid by Compassion International because I come from a very poor background. I engage in academic work to do a good course in future, get a job and look after our family.' (IS/KI/CB/05, adolescent,

Compassion International support beneficiary). This implies that adolescent students do not only engage academically for current success but they appreciate the future value of the education they are currently pursuing. For instance, one compassion adolescent beneficiary stated,

I am motivated to engage in learning in order achieve my goals, I want to be a lawyer or a social worker. I want to do a job that pays me a lot of money. I must get my family out of poverty (IS/CB /03, adolescent, Compassion International

support beneficiary). This implies that Compassion International support beneficiaries appreciate that the support they get should change the financial status of the entire family. He further explains the employability factor by narrating the following;

'My friends and I do extension reading to master the content in order to pass and look after our family in future' (IS//CB/03, adolescent, Compassion International support beneficiary).

Teacher-Student Relationship was revealed as a major factor influencing academic engagement among Compassion International support beneficiaries and non-beneficiaries. Observations of the following narratives attest to this;

I understand biology subject ... The teacher teaches it well and I understand I grasp it well when she is teaching; it really became easy for me (IS/NB/23/1/01/02, adolescent, non-Compassion International support beneficiary).

I am motivated to understand more in order to explain things on my own in discussions and exams (IS/NB/23/1/01/03, adolescent, non- beneficiary).

Regardless of compassion support, key participants (both students and non-students) believed that teacher- student relationship was a key determinant of academic engagement as portrayed in the following narratives;

'...I engage in academics for example in the subjects where I like subject teacher. My experience is about English, I sometimes perform well, participate in his subjects and he likes me (IS/KI/CB/06, adolescent, Compassion International support beneficiary). Another participant had this to say about how teacher student relationship influences academic engagement.

Haaaa! Some teachers are not supportive and are unfriendly so students avoid them. Subjects that I fail most are avoided. There are some teachers who always abuse us and harass us. ...For example, some teachers are not engaged in helping students who fail certain subjects and they end up avoiding them. ...

There is one of the students who used to fail and he used not to regularly attend lessons for that very subject and the teacher made the student to drop out of the school (IS/KI/NCB/01, adolescent, non- beneficiary). Another participant had this to say;

'It's true, when a student is friendly to the teacher, passing the subject is likely, they tend to get in love with that subject, and the reverse is also true. Friendly students tend to freely inquire from teachers about difficult aspects in learning; they participate freely. Actually, there is a student who joined my class in senior one with credit 6 at Primary Leaving Examinations, but I befriended her and she is now the best student in Mathematics. She works hard not to disappoint me. She cannot miss a class, because she knows that I know her, she participates actively and does her private revision. Therefore, the relationship of a teacher and a student has a great influence on the student's academic engagement' (IS/KI/TR/02, a classroom teacher). This implies that teacher-student relationship is a critical aspect in academic engagement enhancement.

This is further affirmed by the experience of one of the adolescent students in the following statement, *"Yes, I avoid engaging in some subjects taught by some teachers who do no help me when I fail their exams. My experience is about English, I sometimes perform well, participate in his subjects and he likes me. Another experience is about one of the students who used to fail and he used not to regularly attend classes because the teacher used to abuse him before the whole class, calling him a failure and the teacher made the student to drop out of the school."*

From the aforementioned qualitative findings, it is evident that apart from the external support imbedded in goal setting training, mentorship and rewards that facilitate higher education attainment, both Compassion

International support beneficiaries and non-beneficiaries highlighted the significance of teacher-student relationships and future career and employability as key factors influencing their academic engagement. Though Compassion International support beneficiaries showcased a distinctive emphasis on personal development and future-oriented initiatives, these aforementioned shared factors suggest a universal importance placed on interpersonal connections within the academic environment.

CHAPTER FIVE

DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

5.0 Introduction

This chapter discusses the study findings according to the study objectives, beginning with demographic characteristics across other study variables. It further presents the mediation effect of self-efficacy on the relationship between achievement goal orientation and academic engagement among adolescent students in Kabale district, South-western Uganda. Qualitative findings are also discussed based on the themes which were generated through in-depth interviews regarding factors that influence academic engagement among the study participants. Study contributions, conclusion, recommendations, and suggestions for further research are made.

5.0 Discussion

5.1 Achievement Goal Orientation Adoption Levels across Demographic Characteristics of Adolescent Students

This section discusses results and insights into achievement goal orientation levels and the different demographic characteristics such as age, gender; compassion support, school type, parents/guardians' marital status, parents/guardians' education and income.

5.1.1 Mastery Approach Achievement Goal Orientation and Demographic

Characteristics of Participants

Results of this study revealed a statistically significant difference in adoption of mastery approach achievement goal orientation between Compassion International support beneficiaries and Non-beneficiaries, (Table 4.1). Specifically, Compassion International support beneficiaries were more likely to adopt mastery approach achievement goal orientation than non-beneficiaries, suggesting that social support positively influences students' adoption of achievement goal orientation. These study findings are consistent with an investigation conducted on French Canadian adolescents which revealed that their perception of emotional support from teachers significantly impacted their endorsement of mastery achievement goal orientation, particularly when they perceived themselves as competent (Smith et al., 2022). The adoption of mastery achievement goal orientation among Compassion International support beneficiaries can be attributed to the multifaceted nature of the support provided, which encompasses not only financial assistance but also mentorship programs, medical services, goal-setting skills and emotional support. The inclusion of privileges appears to play a pivotal role in fostering a mindset focused on skill development and mastery, contributing to the overall success of adolescents in pursuing educational goals. By providing a well-rounded support system, school stake holders and other organisations which support quality education access can empower students to develop mastery-oriented mindsets, ultimately fostering a conducive environment for academic success.

The way the multifaceted support system provided by Compassion International is perceived by beneficiaries results in cultivating an environment

conducive to academic success just as depicted by both the social cognitive and self-determination theories. What do these theories say about this? Bandura in his Social Cognitive Theory asserts that human learning takes place in a social environment with a dynamic and reciprocal interaction of the person, environment and behaviour (Camp & Surum, 2018). This is where Compassion International support fits in as a social environmental factor to invigorate beneficiaries' performance through encouraging mastery achievement goal-orientation.

On the other hand self-determination theory asserts that Feeling self-determined depends on previous experiences of competence, autonomy, and relatedness. Relatedness is when a student feels meaningfully connected to those around him or her. The more often these experiences occur, the higher and more durable the motivation tends to be. Self Determination Theory (SDT) is a macro-theory of human motivation, emotion, and development that takes interest in psychological factors that influence a person's wellbeing such as a desire for mastery of challenging skills, and the need to gain independence to control their behavior as they pursue their goals (Reeve et al., 2018). This ultimately facilitates the development of mastery achievement goal-oriented mindsets, thus overall success of individuals in pursuing their educational goals.

5.1.2 Performance Approach Achievement Goal Orientation and

Demographic Characteristics of Participants

Results also indicated that parents/guardians' education level, income and Compassion International support significantly influenced performance approach achievement goal orientation adoption. Specifically, adolescents whose parents'/guardians had the lowest education and income levels had

higher overall performance approach achievement goal orientation than their counterparts whose parents/guardians had attained secondary school education and above. In addition, Compassion International support beneficiaries were more likely to adopt performance approach achievement goal orientation than their non-supported counterparts.

These results are consistent with a study conducted by Jeniffer, (2016) which found that social economic status positively influenced students' adoption of achievement goal orientation. However, they are inconsistent with some of the previous study findings such as Hussain Ch. et al., (2017) who found out the socioeconomic status of students was not correlated with adolescent achievement goal orientation adoption.

In the current study, variability in participant adoption of achievement goals based on parents' socio-economic status is complex. The results could be explained by the motivational strategies implemented by schools within low socioeconomic communities whereby the best students (based on their performance in examinations) are given rewards to facilitate their wellbeing in education pursuit and sometimes scholarships. Considering the financial constraints experienced by adolescent students from low social economic status as indicated by their parents'/guardians' education level, income and being Compassion International support beneficiary, working hard to outperform their counterparts in in order to receive rewards that can results in their achievement of educational goals and consequently breaking the poverty cycle.

Despite the importance of external rewards, students needed to be made aware of the importance of achievement goals that lead to self-skill enhancement, other than focusing on individualised winning. Moreover, a study

conducted by Zhao (2021) found out that whereas mastery approach achievement goal orientation positively influenced academic engagement, performance goals influenced it negatively. The contradictions in study results in relation with the aforementioned previous studies affirm the complexity of motivational goals in diverse contexts. These findings extend the understanding of context-based demographic characteristics and achievement goals adoption among adolescent students. Context based interventions can be based on these study results to enhance adoption of positive achievement goal orientation.

5.1.3 Mastery Avoidance Achievement Goal Orientation and Demographic Characteristics

The study findings indicated that parent/guardian's income, Compassion International support and school type significantly influenced the adoption of mastery avoidance achievement goal orientation. Precisely, whereas low family income and being in a government school influenced overall adoption of mastery avoidance achievement goal orientation, Compassion International support influenced it at a high-level category. Belonging to a low-income earning family, government school and being a Compassion International support beneficiary was associated with greater likelihood of adopting mastery avoidance achievement goal orientation. This implies that adolescent students with low social economic status backgrounds were likely to be more motivated by a desire to avoid demonstrating incompetence or preferred easier tasks where success is more certain, potentially hindering their overall learning and development. Similarly, a study conducted among Chinese adolescent students found that avoidance goals positively correlated with learning anxiety which led to performance avoidance achievement goal orientation (Kong et al., 2023).

However, a different argument was advanced by Subaşı (2020) who found out that avoidance goals were positively correlated with task value and academic efficacy among Turkish and Korean students. The findings among Korean students affirm the fact that in countries with collective cultures like Uganda, avoiding negative consequences is an important motivational factor towards achieving academic goals.

Students avoid being branded incompetent by the society around them, so they make effort to avoid academic tasks they deem difficult and concentrate on those they deem possible to avoid being ridiculed. As the social cognitive theory suggests, the feedback from teachers, peers and parents regarding academic outcome influences one's adoption of an achievement goal type whether it results in positive results or not. The contradictions in the study findings present practical implications (presented later in recommendation section, 5.8) for interventions to enhance positive achievement goals among economically deprived communities.

5.1.4 Performance Avoidance Achievement Goal Orientation and Demographic Characteristics

Findings of the current study showed that parent/guardian education and Compassion International support significantly influenced the adoption of performance avoidance achievement goal orientation. While at low levels, Compassion International support significantly influenced performance avoidance achievement goal orientation (fear of performing more poorly than others), it is influenced by parent/guardian education at high levels. Adolescent students whose parents/guardians had the lowest education level and Compassion International support were more likely to adopt PAV than their

counterparts whose parents/guardians' education was above primary and non-beneficiaries.

The aforementioned results imply that adolescent students from low socio-economic status backgrounds are likely to avoid engaging in academic tasks that would prevent them from outperforming their counterparts with a considerable level of anxiety to avoid being identified as academically weak students. Being identified as a poorer performer than others may deny socially disadvantaged students an opportunity to receive external rewards as well as possible financial support to further their education. So, the fear of failure results in performance avoidance goal endorsement yet may lead to high academic engagement in tasks which students deem easier than others. These findings agree with those of Subaşı (2020) who found out that among Turkish and Korean students, avoidance goals were linked to positive academic outcomes. Moreover, Bruno and Darnon (2019) who found out that adolescent students from low social class were more likely to endorse performance avoidance goals than their counterparts from high economic status backgrounds.

Moreover, an experimental study done among French university students found that performance avoidance goals were associated with poor academic performance (Pierre et al., 2007). Another study conducted among students in higher education institutions in Europe found that avoidance achievement goals were associated with surface learning, (Soyer & Kirikkanat, 2019). Overall, the results of this study provide insights on performance avoidance achievement goal orientation preference and its impact on academic engagement among students within low resource settings. Interventions focusing on promoting a culture that embraces resilience and improvement to

mitigate the negative effects of performance avoidance goals could use information from this current study to implement context specific strategies. Consequently, adolescent students can be empowered to overcome fear of failure and focus on a more positive and fulfilling educational experience.

5.2 Self-Efficacy Levels and Demographic Characteristics of Adolescent Students in Secondary Schools in Kabale district, Southwestern Uganda

This section discusses results according to how proportions of participants are distributed according to self-efficacy levels across demographic characteristics including age, gender, class, compassion international support, school type, parents/ guardians' marital status and income. Results indicated that generally, adolescent students in Southwestern Uganda had moderate levels of self-efficacy (see appendix B, Table B.2).

5.2.1 Demographic Variations in Overall Self-Efficacy Levels

Results indicated that age, students' class, parents/guardian's marital status and income, Compassion International support and school type influenced self - efficacy. Precisely, age significantly influenced self-efficacy, with the middle (15-17 years) and early (12-14) adolescents having higher self-efficacy than late adolescents (18-21). These results compare with those of Campos et al. (2019) who found out that adolescent age influenced their self-efficacy levels especially when younger adolescents got social support from their parents and peers. The findings also indicated that significant differences in class and moderate self-efficacy with students in senior one and two having higher self-efficacy than their counterparts in senior three and five. Though, not many studies have focused of assessing the influence of students' class and self-

efficacy, related studies focusing on age as a predictor of self-efficacy may offer helpful information since age and class move in tandem.

Parent/guardian marital status significantly influenced self-efficacy, whereby adolescents with single parents had moderately higher self-efficacy than their counterparts with parents in other marital statuses. This implies that as adolescents observe their single parents maneuvering through life, their own beliefs in being successful at achieving academic goals is enhanced. Results further indicated that parents/guardians' income influenced self-efficacy with adolescents whose parents/guardians whereby at a moderate level, adolescents with parents in the lowest income category had higher self-efficacy than their counterparts whose parents/guardians' monthly income was above 100,000 Ugandan shillings.

Compassion International support and school type significantly influenced self-efficacy at different levels. Specifically, Compassion International supported adolescents and students in the government school were more likely to have higher self-efficacy compared to their non-beneficiaries and those who go to privately owned schools (Table 4.5). The aforementioned demographic characteristics depict low social economic status and the associated adversity which may result in academic anxiety which can compromise students' confidence in accomplishing their academic goals. This agrees with Lee et al. (2022) who found out that among Korean adolescents, social economic status influenced self-efficacy among students from low income families whereby adolescents who had higher levels of family satisfaction had higher self-efficacy than those with low family satisfaction. This implies that social economic status may not solely influence an

individual's self-efficacy, but rather the perception they have about their families. These study findings are inconsistent with those of Wiederkehr et al. (2015) who found out that social economic status influenced both school self-efficacy and academic performance with adolescents and children from low social economic status backgrounds having lower self-efficacy (performance inferiority) than their counterparts. The contradiction can be attributed to the fact that despite the low social economic status background, Compassion International support beneficiaries may have their self-efficacy enhanced by the mentorship they receive. There are no studies that have investigated the influence of Compassion International support on student's self-efficacy. In addition, in the low resource communities within the developing countries like Uganda, economically deprived students may work harder to attain the education levels that can aid successful career development in order to break the poverty chain in their families ref. As a result, they excel in academics which consequently build their self-efficacy.

Results indicated that gender and parents'/guardians' education level did not significantly influence self-efficacy. Although some studies have found contradictory results, such as in a study by Fallan and Opstad (2016) which stipulated that majority of the females had lower self-efficacy than their male peers. These findings resonate with Robinson et al.(2022) who reported that females had lower academic self-efficacy than their male peers even when both categories had the same prior achievement. However, these study results disagree with the findings of a meta-analysis of gender differences in self-efficacy levels across the world (UK, Austria, China, USA, Chile and Spain) which report that females had higher e-learning self-efficacy than their male

peers (Yu & Deng, 2022). In a male dominated society like Uganda, it is not surprising that there are no gender differences and self-efficacy levels because, while male children are more favoured, respected and raised to believe that they are more important than girls, once a girl child in such an environment has an opportunity to access education, their confidence in learning is enhanced. The findings provide insight regarding the understanding of self-efficacy among adolescent students in different contexts.

Overall, the study provides valuable insights into the multifaceted nature of self-efficacy development among adolescent students, emphasizing the importance of considering both social cognitive theory and self-determination theory to comprehensively understand the intricate interplay of factors influencing self-efficacy in diverse contexts.

5.2.2 Self-Efficacy Sub-constructs (Social, Emotional & Academic) and Demographic Characteristics

5.2.2.1 Demographic Variations in Social Self-Efficacy

Results indicated significant differences in gender and social self-efficacy. At a higher level, females had higher social self-efficacy than males (Table 4.6). Results resonate with findings of past research by Campos et al. (2019) who found out that female adolescents had higher social self-efficacy than their male counterparts. On the contrary, results of this study are inconsistent with some previous research findings such as Lee et al. (2002) who found that being a boy was significantly associated with high self-efficacy. Results of this study differ from those of Armum and Chellappan (2016) who stipulated that among Malaysian adolescents, there were no differences in gender and social self-efficacy.

The variations within the study findings could be attributed to diversity in environmental factors. In the context of low social economic status environments like Uganda, girls are encouraged to perfect their socialisation skills as they focus on keeping socially upright homes, maintaining social ties within extended families and the community at large. It is not surprising therefore that females in this study sample had high social self-efficacy levels than males. Therefore, interventions to enhance social self-efficacy for successful social student-centred learning should take gender differences into consideration.

Results of this study further indicated that parents/guardians' education and income, Compassion International support and school type significantly influenced social self-efficacy. Specifically, adolescent students who go to government school, were compassion beneficiaries, had parents/guardians with the lowest education and income level had higher social self -efficacy than their peers. The aforementioned characteristics depict low social economic status, which implies that adolescent students within the low social economic status backgrounds had higher social self-efficacy if they were receiving external support from Compassion International than their counterparts from high social economic status backgrounds. Results of the current study contradict those advanced by Lee et al. (2022) who stipulated that adolescents whose parents had received higher education (as a measure of social economic status) had high self-efficacy.

Within low social economic status settings in Uganda, this study has highlighted the multifaceted financial and mentoring support offered by Compassion International in enhancing the self-efficacy of the beneficiaries.

The study findings resonate with those of Sheikh et al. (2022) who did a closely related study and pointed out that social support received from peers increased self-efficacy among adolescents from low socio-economic backgrounds.

Apart from being a Compassion International support beneficiary, adolescents from adolescents from low social economic status backgrounds tend to study hard with a desire to attain the education that their parents missed out due to financial constraints which results in high academic performance and consequently high self-efficacy. Finally, belonging to a government school where there is nearly same social class, buffers students' social self-efficacy. The government aided schools in Kabale district, Southwestern Uganda are mainly occupied by students from poor backgrounds because they benefit from universal secondary education (a government program that provides education access for the economically constrained students). Moreover, previous research by Cheng (2020) pointed out that believing in oneself to successfully complete an academic activity enhances academic effort and commitment to higher academic objectives. Academic confidence and optimism are essential to involvement. Heo et al. (2021) also believed that if a student lacked confidence in their academic abilities, they would lose interest in school and quit. Findings of this study provide critical information that can promote culturally sensitive interventions to create a supportive ecosystem that fosters social self-efficacy.

5.2.2.2 Demographic variations in Emotional Self-Efficacy

Adolescents with Compassion International support and those whose parents/guardians had secondary school education were likely to have high emotional self-efficacy. The current study findings resonate with those of Meilstrup et al. (2019) who purport that though school children from low

socioeconomic status backgrounds usually have lower levels of self-efficacy, and higher social competence, which cause them to have higher social self-efficacy than their peers from high social economic status backgrounds. Indeed, the multifaceted support provided by Compassion International and the less educated parents/guardians who avail enough quality time with their children (since they are hardly involved in formal employment but rather self-employed) results in high social self-efficacy.

Results of this study further indicated that there was no significant difference between gender and emotional self-efficacy (Table 4.7). These study findings compare with those Beri and Akhoun (2021) who reported that among Indian secondary school students, there was significant difference in emotional self-efficacy between males and females. The similarity in the study findings are attributed to closely related environment because just like Uganda, India is a male dominated community and adolescents are likely to experience poverty adversity leading to similar characteristics regarding emotional self-efficacy.

5.2.2.3 Demographic variations in Academic Self-Efficacy

The study findings indicated age emerged as a significant factor influencing academic self-efficacy whereby late adolescents demonstrated higher moderate academic self-efficacy, while early adolescents exhibited higher total academic self-efficacy. Additionally, class level had a significant impact, with senior five students displaying higher academic self-efficacy compared to their junior counterparts (Table 4.8). Findings of the current study agree with those of Larsson and Regborn (2019) who found that among the Korean youth, older school children had higher academic self-efficacy than their junior counterparts.

Moreover, Fakhrou and Habib, 2021 revealed that high academic self-efficacy among university students in Iraq resulted in high academic performance.

Regarding gender, females exhibited moderately higher academic self-efficacy than males (Table 4.8). These study findings are consistent with those of Badamasi (2020) who found that among Nigerian secondary school students, though there was no significant difference in academic self-efficacy between males and females, the mean scores indicated that females had a higher self-efficacy than males. This was in contrast to Jamil (2018) who purported that among senior high school students in Indonesia, males had higher academic self-efficacy than females. The variation in the findings could be premised in social cultural biases within the male dominated societies where once a female child is given an opportunity to access education, their academic self-efficacy is enhanced.

Parental/guardian income played a crucial role in shaping academic self-efficacy, indicating that adolescents from lower-income families had higher academic self-efficacy at both moderate and high levels. The study also highlighted the influence of external support, with Compassion International support beneficiaries demonstrating significantly higher overall academic self-efficacy compared to non-beneficiaries (Table 4.8). Results of this study contradict those of Ho et al. (2021) who found a negative significant association between parents' income and students' academic engagement whereby high students with low income parents had lower academic self-efficacy than those with high income. Results further disagree those of Tan et al. (2023) who pointed out that family social economic status had a positive relationship with adolescents' self-efficacy.

The qualitative findings give a critical understanding of how context-based factors influence students' self-efficacy. For instance, one compassion adolescent beneficiary stated,

I am motivated to engage in learning in order to achieve my goals, I want to be a lawyer or a social worker. I want to do a job that pays me a lot of money.

I must get my family out of poverty (IS/CB /03, adolescent, Compassion International support beneficiary). In the low resource education setting, adolescents whose parents are low income earners strive to excel in academics in order to change the economic status of their families through lucrative employment to get their family out of poverty. The findings of the current study suggest that academic self-efficacy is a nuanced construct influenced by various demographic factors. Age, class level, parental income, gender, and external support were identified as key determinants. The implication is that interventions aimed at enhancing academic self-efficacy should consider these factors when tailoring strategies for different groups of adolescent students. To foster academic self-efficacy, educators and policymakers may need to implement targeted interventions based on the identified demographic influencers. For instance, programs focusing on enhancing self-efficacy among early adolescents may differ from those designed for late adolescents.

Additionally, recognizing the role of external support, particularly from Non-Governmental Organisations like Compassion International, can inform the development of support systems that positively impact academic self-efficacy. Future research could delve deeper into the specific mechanisms through which these demographic variables influence academic self-efficacy to refine intervention strategies further.

5.3 Demographic variations in Academic Engagement Levels among Adolescent Students in Secondary Schools in Kabale district, Southwestern Uganda

This section discusses results about academic engagement levels across demographic characteristics (age, gender, class, compassion support, school type, parents/ guardians' marital status, education and income). Results on overall academic engagement and its sub-constructs are discussed systematically.

5.3.1 Demographic variations in Overall Academic Engagement Levels

Investigation of overall academic engagement variation by age and class level revealed a statistically significant difference in academic engagement across age categories (Table 4.9). Middle adolescents exhibited a significantly higher mean rank in academic engagement compared to early and late adolescents. Results of the current study further indicated that there was a statistically significant difference in academic engagement across different classes whereby students in senior one showed higher engagement compared to those in senior three, two, and five. Since age and progression in class move on tandem, these study findings mean that academic engagement levels among adolescent students in Kabale district, Southwestern Uganda decreased as students progressed in school. This is consistent with previous research findings by Fredricks et al. (2019) who found that as adolescents progressed in school, their engagement levels declined. Results of this study emphasised the role of social influences in shaping engagement levels during adolescence which resonates with the social cognitive theory which asserts that human learning occurs in a

social environment with a dynamic and reciprocal interaction of the person, environment and behaviour (Camp & Surum, 2018).

Results further indicated statistically significant difference in parental/guardians' education, income and Compassion International support with uneducated parents showing higher mean ranks in overall academic engagement, lower income and Compassion International support being associated with higher academic engagement. Compassion International support for adolescents from low socioeconomic status backgrounds entails offering financial assistance for school fees, providing scholastic materials and mentorship regarding education goals setting to release children from poverty through education attainment. Important to note is that illiteracy, low income and Compassion International support reflects high poverty and low social economic status. Therefore, these study findings are consistent with Fredricks et al. (2019) who stipulate that adolescent academic engagement among adolescents from high poverty communities within western industrialised context was influenced by support from family and peers. In the case of Compassion International support, beneficiaries from high poverty families receive financial and social-emotional support they would be receiving from their parents.

Uneducated parents and those who earn the lowest monthly income are commonly those who are either self-employed or majorly engage in full time parenting, giving their children an opportunity to heighten their cognitive and socio-emotional development. Similarly, another study done among high school students in Indonesia found out that parental involvement, and peer support increased student academic engagement (Sa'diyah & Qudsyi, 2016). The

findings of this study provide important information for non-profit organisations and schools interested in interventions that promote poverty eradication through successful education.

In addition, the Ugandan setting where there are high poverty related constraints, parents who fail to attain desired education motivate their children to study hard and attain the education they were involuntarily unable to achieve. The statistical findings resonate with most of the students' qualitative narratives which indicated that students were motivated to engage in academic work in order to eliminate poverty in their homes which is associated with their parents' illiteracy and joblessness due insufficient education attainment. For instance, one Compassion International support beneficiary confessed,

“I am motivated to engage in learning in order achieve my goals, I want to be a lawyer or a social worker. I want to do a job that pays me a lot of money. I must get my family out of poverty” (IS/CB /03, adolescent, Compassion International support beneficiary). These link well with the self-determination theory (SDT) and social cognitive theory (SCT), which infer that both self-determined goals and environmental factors influence an individual's academic engagement levels.

The current study findings are on the contrary with those of Wang et al. (2023) who stipulated that students' academic engagement and performance were influenced by parents' education levels whereby the higher the education level of the parents, the more likelihood it was for their children to engage well in academics. The findings further disagree with research findings in high income countries where highly educated parents are more involved in their children's learning dynamics hence good education outcome (Naite, 2021).

The variation in the findings is premised in contextual differences because in the developing countries, characterised by educated people hassling to earn a living, the more educated parents are, the busier they are likely to be for their children and consequently, less involved in their education process. This interpretation aligns with both social cognitive theory and self-determination theory, emphasizing the influence of environmental factors and the pursuit of autonomous goals on academic engagement (Camp & Surum, 2018; Reeve et al., 2018). The more a parent is focused on money making engagement, the less involved they are likely to be in their child's academic pursuit hence low academic engagement levels. Most qualitative data narratives from adolescent students indicated that the less educated parents encourage their children to keep focused on academic excellence to compensate for their perceived education deficits that resulted from financial deprivation.

Moreover, previous research findings stipulate that adolescents from poor socioeconomic backgrounds made better use of parental involvement and were able to experience positive education outcomes (Şengönül, 2022). Similar findings were established among university students in Turkey where students' parents from low socio-economic status backgrounds were more involved in their children's academic work which promoted greater academic engagement than their counterparts from high income backgrounds (Horanicova et al., 2022).

The Ugandan context is not different because parents from poor backgrounds spend most of their time with their children in early years which gives them an opportunity to experience positive development compared to their counterparts from highly educated families where parents are involved in formal

employment or other money-making activities as unexperienced housemaids take care of their children. In addition, adolescent students from low socio-economic status families have a desire to succeed in academic in order to attain careers that lead to high paying jobs with an intention of breaking the chain of poverty. This confirms that the influence of social economic status and adolescent students' academic engagement levels differ globally hence insight for context specific interventions geared towards parental involvement and adolescent students' academic engagement enhancement. This supports self-determination theory, which posits that the quality of relationships and support from the environment influences intrinsic motivation.

5.3.2 Demographic variations in Academic Engagement Sub-constructs

Behavioural Engagement and Demographic Characteristics

The Kruskal Wallis test results indicated that there were statistically significant differences in behavioural engagement across different classes resonate with previous studies (Fredricks et al., 2016) suggesting that students in earlier grades tend to exhibit higher levels of engagement while the engagement levels tend to decline as students advance in school. Findings of this current study further indicated that, single parenthood was significantly associated with higher levels of moderate behavioural engagement.

These findings are inconsistent with past research in a book chapter by Jowi and Obamba (2013) pointing out that family structure significantly affects student engagement with married parents having a positive influence on their children's academic engagement compared to their peers with single parents. The contradiction in the study findings are premised in the study findings advanced by Yang et al. (2020) who stipulated that school social interaction provided by

teachers positively influenced learning engagement and academic achievement. Moreover, in low socioeconomic contexts, children raised by single parents tend to fully commit to learning in order to please their parents whom they feel are sacrificing, doing all they can to meet their children's need single headedly. Qualitative narratives in this study attest to this whereby adolescents with single parents narrated how they are motivated to study hard in order not to frustrate their single parents who sacrifice a lot to meet their education needs.

The increased total behavioural engagement among students with lower-income parents echoes the qualitative findings of this study highlighting the role of economic disparities in shaping behavioural engagement. The qualitative findings showed that socioeconomic status played a vital role in influencing adolescents' behavioural engagement whereby most participants emphasised their commitment to engaging in all academic endeavours because they want to they want to acquire good grades, get good jobs that could relieve them from poverty. Furthermore, the study findings indicating that Compassion International support positively influenced behavioural engagement concurs with research emphasising the role of support programs in fostering student engagement (Olana & Tefera, 2022).

Being a Compassion International support beneficiary is an indicator of high poverty background, however, the support provided by Compassion International motivates the beneficiaries to behaviourally engage in academics in order to experience education success which results in employment and poverty eradication. Qualitative results from Compassion International support beneficiaries attest to this. For instance, a Compassion International support beneficiary lamented,

'All my school fees are paid by Compassion International because I come from a very poor background. I engage in academic work to do a good course in future, get a job and look after our family.' (IS/KI/CB/05, adolescent,

Compassion International support beneficiary). Overall, these findings contribute to the existing body of knowledge by offering nuanced insights into the multifaceted determinants of behavioural engagement among adolescents, highlighting the importance of considering socio-economic factors and support programs in educational interventions. The current study's findings extend existing research in the field of adolescent behavioural engagement.

Emotional Engagement and Demographic Characteristics

The results of the current study indicated several statistically significant differences in emotional engagement among adolescent students based on age, class, parents' education, parents' income, and Compassion International support (Table 4.11). Notably, early adolescents exhibited distinct emotional engagement patterns based on their age, with those in the early stage having higher mean ranks than their counterparts in middle and late adolescence. Similarly, class level played a role, indicating that students in senior one and two students had significantly higher mean ranks in emotional engagement compared to those in three and five.

Since students' age and class move in tandem for most students, these results imply that as adolescent students' progress in school, their emotional engagement levels reduce. Results in this study are consistent with those of Markowitz (2017) who reported that emotional engagement decreased as students grew older. On the contrary, findings of the current study disagree with those of Morrison and Schoon (2018) who pointed out that emotional

engagement levels among adolescents in England increased overtime especially when they aspired to continue in education. The variation in findings attest to the complexity of emotional engagement dynamics and the necessity for context and age-specific interventions to support emotional wellbeing among adolescent students given the critical role it plays in learning. This agrees with Li and Xue (2023) who noted that differences in behavioural engagement based on age, gender, school type, and parental education aligns with certain studies emphasizing the complexity of these relationships and the need for a nuanced understanding.

Findings of this study further indicated a statistically significant influence in emotional engagement based on parents/guardians' educational background, income level and compassion support. Students with uneducated parents/guardians, those with lower income levels and the Compassion International support beneficiaries tended to have higher emotional engagement (Table 4.11), emphasizing the impact of socio-economic factors on emotional experiences. Findings of this study concur with the qualitative narratives whereby adolescent students within low socioeconomic status backgrounds confessed that they received emotional and social support from their parents who spend some of their time home making and guardians (mainly Compassion International officers in charge of students welfare). However, these results are inconsistent with those of Qiu and Ye (2023) who reported that among college students, socioeconomic status had a positive direct relationship with emotional engagement. Moreover, study findings by Horanicova et al. (2022) point out that adolescents from low socioeconomic backgrounds were likely to have negative emotions towards learning. Interestingly, participant gender, school

type, and parents' marital status did not show statistically significant differences in emotional engagement levels (Table 4.11). This implies that emotional engagement levels vary irrespective of student's gender, school type and parents' marital status, highlighting the complexity of these relationships. The findings underscore the importance of considering diverse factors when examining emotional engagement in adolescents and suggest potential areas for intervention and support to enhance emotional well-being. The nuanced understanding provided by these results can guide educators, policymakers, and practitioners in tailoring strategies to address the specific emotional needs of adolescents based on their unique demographic and socio-economic contexts.

Cognitive Engagement and Demographic Characteristics

Results indicated a statistically significant difference in age at total cognitive engagement, with middle and early adolescents having higher mean ranks than late adolescents (Table 4.12). This suggests that age influences total cognitive engagement implying that age is a factor impacting cognitive development. Results further indicated that there was a moderate statistically significant difference in class at a high level of cognitive engagement with students in lower classes having higher mean ranks. Results imply that as students grow older and while progressing in class, their cognitive engagement levels tend to decline. These study findings resonate with previous research results which point out that students' engagement levels declined as progressed in age and school (e.g., Fredricks et al., 2016; Markowitz, 2017). Results further concur with those of Amir et al. (2014) who found that among Malaysian (a developing country) adolescents experienced decline in cognitive engagement as they progressed in school. On the contrary, study findings by Earl et al. (2023) who maintained

that cognitive engagement levels among adolescent students in the United Kingdom increased with age as they progressed in class especially when they experienced psychological needs satisfaction. The contradiction in the aforementioned research findings are premised in contextual differences.

Results of the current study further indicated that parents'/guardians' education had an impact on cognitive engagement, with uneducated parents/guardians having higher mean rank ($M= 188.58$) than educated parents ($M= 142.33$; $p= .027$). Additionally, parents/guardians' income influences total cognitive engagement, with lower income levels associated with higher mean ranks.

Similarly, results indicated significant difference between Compassion International support beneficiaries and non-beneficiaries, with beneficiaries having higher mean ranks (Table 4.12). This suggests that students from low socioeconomic status backgrounds had higher cognitive engagement levels than their counterparts. This contradicts past research findings by Moller et al. (2022) who stipulated that socioeconomic factors positively influenced cognitive development whereby adolescents within high socioeconomic backgrounds (characterised by having breakfast, family income and parents' education level) had higher cognitive engagement levels than their counterparts from low socioeconomic status backgrounds. The variation is premised in existing literature that underscores the influence of the positive impact of support programs on cognitive outcomes among adolescents (Yang et al., 2020).

Cognitive Engagement and Demographic Characteristics

A significant difference in gender at a low level of cognitive engagement suggests that males have a higher mean rank than females. This gender

difference in cognitive engagement is consistent with some previous studies that have explored gender-related disparities in academic engagement. Such as Yu (2021) who found that boys were more likely to cognitively engage in academics than girls. These results are contrary to findings of Amir et al. (2014) who pointed out that, among Malaysian adolescents, females had higher cognitive engagement levels than males. The variations in findings are explained by the complex nature of cognitive engagement dynamics and contextual differences. Therefore, interventions to increase cognitive engagement in schools should consider gender and contextual differences.

No statistically significant difference was found in participants' school type and their parents/guardians' marital status at different cognitive engagement levels. This suggests that, in this context, these factors may not be strong predictors of cognitive engagement. The study's findings contribute to the understanding of various factors influencing cognitive engagement among adolescents, and the interpretations add nuance to existing literature in the field. Future research could venture into implications of these factors for educational interventions and policies since cognitive engagement is a major factor that influences successful academic outcomes.

Agentic Engagement and Demographic Characteristics

Results of the study indicated statistically significant differences in agentic engagement and several demographic characteristics. Notably, a statistically significant difference was observed in class, indicating that students in senior one exhibited higher levels of agentic engagement compared to their counterparts in senior two three and five (Table 4.13). This finding aligns with prior research suggesting that younger students may display higher levels of

enthusiasm and proactive behaviour in their educational pursuits than older students whose learning interest decline as they progress in school (Markowitz, 2017). However, Covas (2021) advanced contradictory results indicating that among Portuguese public higher education institutions, older students had higher engagement levels than younger students.

Additionally, the study reveals a significant association between parents' or guardians' income and total agentic engagement. Specifically, participants whose family incomes was 100,000 Ugandan shillings and below exhibited a higher mean rank in agentic engagement than those with higher income brackets. Moreover, results further indicated substantial differences between Compassion International support beneficiaries and non-beneficiaries in various levels of agentic engagement. Beneficiaries consistently demonstrated higher mean ranks, emphasizing the role of support programs in fostering student agency.

The comparison between private and government schools also yielded significant differences, suggesting that the government school students may have higher agentic engagement than their counterparts in private schools (Table 4.13). These study findings imply that belonging to a government school resulted in having high agentic engagement levels. This outcome may be linked to the impact of external support given to such vulnerable students as well as students' self-determination and proactive involvement in their academic activities for better career and employment prospects. Qualitative narratives attest to this where by participants emphasised that they enjoyed engaging in subjects taught by teachers who were friendly, gave them the freedom to contribute and receive positive feedback. Results of this current study resonate

with those of Molinari and Grazia (2023) who pointed out that a conducive school climate characterised by good teacher-student relationship, autonomy and peer support were key factors that positively influenced agentic engagement. Results further concur with those of Reeve and Shin (2020) who report that teacher support for autonomy has great positive influence on students' agentic engagement.

It is worth noting that the study did not find statistically significant differences in agentic engagement concerning participants' gender, parents' or guardians' marital status, and high agentic engagement levels, (Table 4.13). This highlights the need for a more nuanced understanding of the factors contributing to agentic engagement, acknowledging that certain demographic variables may not be as influential as others in the context of the current study. Agentic engagement is characterized by its purposive, proactive, and reciprocal nature, playing a pivotal role in fostering significant student outcomes, including enhanced learning and academic achievement. Considering the importance of agentic engagement (as a vital component for students' purposeful and proactive involvement in the instructional process, wherein they articulate their interests and contribute insights). These results offer a comprehensive picture of the multifaceted determinants of agentic engagement, emphasizing the importance of considering class level, socioeconomic factors, external support systems, and school type in understanding and promoting student academic engagement.

5.4 Self-Efficacy Mediates the Relationship between Achievement Goal Orientation and Academic Engagement

In this section, the mediation analysis results are discussed. This analysis aimed to explore the indirect effect of achievement goal orientation on academic

engagement through self-efficacy. Looking at achievement goal as approach goals (mastery and performance) and avoidance goals (mastery and performance) this study predicted that self-efficacy, a central tenet of SCT could play a crucial role in influencing how individuals approach learning tasks. The achievement goal orientation an individual prefers such as mastery approach, results in one's ability to develop stronger belief in their own capabilities to succeed academically. Basing on SCT and SDT, self-efficacy acted as a mediator between achievement goal orientation and academic engagement in this study and the findings are discussed following the diagnostic checks.

Mediation analysis showed that SE has a significant mediation effect on the relationship between achievement goal orientation and academic engagement. Specifically, achievement goal orientation sub-constructs predict self-efficacy, self-efficacy predicts academic engagement levels, self-efficacy partially mediates the relationship between approach goals and academic engagement but fully mediates the relationship between avoidance goals and academic engagement.

5.4.1 Self-Efficacy mediates the Relationship between Approach Goal Orientation and Academic Engagement

The mediation analysis results indicated a partial mediation effect of self-efficacy on the relationship between approach goals and academic engagement (Tables 4.20 & 4.21). Not many studies have specifically investigated the mediation effect of self efficacy on the relationship between approach achievement goal orientation (mastery and performance) and academic engagement. Never the less, some studies on academic engagement and other predictor variables have found that self-efficacy significantly mediates the

relationships (p.). For example a study by Chen et al., (2021) found that self-efficacy significantly mediated the relationship between proactive personality and student academic engagement among adolescents.. Other studies have investigated the mediation role of self-efficacy on the relationship between teacher support and academic achievement and found that self-efficacy is a strong mediator variable (Honicke et al., 2020; Liu et al., 2022). Alhadabi and Karpinski (2020) also maintain that self-efficacy beliefs (SE) played a supportive role in achievement goal orientation and students' academic performance. In their study particularly, SE positively affected the influence of mastery and performance-approach goals on academic achievement interpreted as Grade Point Average (GPA). Another study done among Malaysian students in an e-learning environment revealed that self-efficacy played a fundamental role in mediating time management and students' performance (Osman, 2018).

Similar to the results of previous research Duchesne et al. (2019); Suprayogi et al. (2019); Wang et al. (2023); Wolverson et al. (2020), this study findings stipulate that the stronger the belief an individual has in the ability to successfully achieve their academic goals, the more the likelihood of realising positive academic outcomes. Beliefs indirectly or directly determine how much effort an individual will put into academic tasks and how long they will persist in the face of challenges. High self-efficacy can create a self-fulfilling prophecy, in which a person believes that they are effective, in control, and worthwhile. However, self-efficacy is not the only factor that influences academic engagement and approach goal orientations since the mediation effect is partial. Other factors like teacher-student relationship, external rewards and mentorship

training, career and employability prospects revealed in qualitative narratives also influence students' academic engagement levels.

Results of this study contribute to the existing body of cross-cultural research in the area of adolescent students' learning dynamics by revealing a clear picture of approach goal orientations adoption and academic engagement dynamics within low socio-economic communities like Uganda. Students who are motivated by approach goals (both mastery and performance) tend to exhibit higher engagement in the learning process, and a greater likelihood of achieving success, particularly when they possess a strong sense of confidence in their abilities. The adoption of approach goals by students enables them to perceive difficult learning tasks as opportunities to improve their knowledge framework, focus on positive outcomes, and cultivate a sense of self-efficacy in tackling any learning challenge.

The enhancement of ASE enables students to exhibit heightened psychological resilience and dynamism, thereby establishing the necessary conditions for effective engagement in learning activities. Students with high academic self-efficacy are more likely to increase their efforts and perseverance in order to effectively complete their academic work, and as a result, they may outperform their peers. The results also agree with the SCT on the notion that individuals have the capacity to set goals for themselves, monitor their progress, and adjust their behaviour accordingly (Nabavi, 2014). However, human behaviour is shaped not only by cognitive processes and personal characteristics but also by environmental factors and these interact and influence each other in complex ways. This explains the partial mediation of self-efficacy on approach goals and academic engagement.

5.4.2 Self-Efficacy mediates the Relationship between Avoidance Goal

Orientation (Mastery and Performance) and Academic Engagement

The mediation analysis results of this study indicates a full mediation effect of self- efficacy on the relationship between avoidance goals and academic engagement (Tables 4.22 & 4.23). Specifically, mastery avoidance goals and performance avoidance goals have a direct positive relationship with academic engagement but when self-efficacy is included in the regression model, avoidance goals (mastery and performance) orientation do not significantly predict academic engagement. These results imply that avoidance goals have significant indirect effect on academic through the mediating role of self-efficacy.

Moreover, the effect of mastery and performance avoidance goal orientation on academic engagement increased with increase in explanation of variance in the academic engagement from 3.40% to 35.0% and 4.9% to 35.2% respectively when self-efficacy mediated the relationship. This means that self-efficacy indirectly reducing the negative impact of avoidance increases achievement goal orientations on academic engagement.

The present study findings align with those of a prior investigation conducted among Chinese university students, which revealed that performance avoidance goals were positively associated with academic performance (Zhang et al., 2022). Specifically, students who embrace performance-avoidance goal orientation (PAV) tend to opt for tasks that are less challenging in order to evade the possibility of being perceived as academically inferior to their peers, while still actively engaging in academic tasks. In the present study context, concerning adolescent students belonging to low socioeconomic status

communities, where academic performance rankings continue to hold significant influence over various aspects of students' success and employability, it is imperative that students engage in PAV as a prerequisite. However, the findings of this study are inconsistent with some previous research findings which indicate that avoidance goals are negatively correlated with academic outcomes. For example, Alhadabi & Karpinski, 2020 reported that avoidance goals negatively correlated with students' academic performance and when self-efficacy was introduced to the model, the effect of avoidance goals became non-significant. The results of the current study provided a theoretical framework for the direct and indirect effects of study variables in the context of low-resource secondary school education.

The findings resonate with the theoretical perspective that self-efficacy plays a critical role in shaping individuals' behaviour and motivation (Bandura, 1996). When individuals have low self-efficacy, they may feel less capable of succeeding on academic tasks they deem difficult, which in turn reduces their engagement despite their achievement goal orientation preference.

Similarly, the Social Cognitive Theory (SCT) which suggest that an individual's behaviour is shaped not only by environmental factors but also by their own cognition and behaviour. Self-efficacy is one of the important cognitive factors that can influence an individual's behaviour. In the context of this study, students who have high self-efficacy are more likely to adopt approach goals (performance and mastery) goals and be engaged in academic activities for self-skill enhancement which consequently enables them to outperform their counterparts and gain rewards and recognition.

On the contrary, students with low self-efficacy may avoid academic tasks they deem difficult and opt for simple tasks which may consequently enable them to outperform their counterparts as well. Thus, within low resource education contexts, despite an achievement goal orientation a student adopts, he/she successfully engages in academics and experiences positive education outcomes as long as they have enhanced self-efficacy.

5.5 Context-based Factors Influence Academic Engagement among Adolescent Students

This section reflects upon the qualitative findings to answer the research question to achieve Objectives 5. Based on Social Cognitive Theory as the theoretical foundation, an investigation to explore how context-specific factors that influence academic engagement are met or thwarted within Kabale district, Southwestern Uganda academic context and their impact on engagement was done. In addition, Self-Determination Theory underpinned the qualitative inquiry focusing on the psychological needs of autonomy, competence, relatedness and academic engagement.

Thematic reporting of the findings obtained through participants' narratives are discussed in relation to the theoretical constructs. The theoretical constructs guided thematic analysis to extract meaningful patterns and themes from qualitative data, contributing to a deeper understanding of the factors influencing academic engagement in Kabale district, Southwestern Uganda. Explanatory and descriptive responses were then garnered from in-depth interviews with a subset of adolescents who participated in the quantitative data collection, involving Compassion International officer and adolescent beneficiaries, classroom teachers and directors of studies. A number of factors

influencing academic engagement among adolescent students were revealed. Most were linked to compassion support, for instance goal setting training skills, mentorship program, external rewards and future employability prospects. Other factors that were cutting across both groups was teacher-student relationships.

Apart from the desire to master academic skills in preparation for high paying job careers in order to break the poverty chains in their families, Compassion International support beneficiaries were also rewarded by their supporters for surpassing their peers in academic performance. For instance, the most outstanding students in the class receive sponsorship to pursue their education in top-rated institutions across the country. Participants' opinions regarding external rewards as an essential factor that influences their engagement levels were portrayed through sub themes which included, rewards offered by compassion supporters, parents' expectations and peer influence manifested in the desire to outperform their counterparts. These qualitative findings resonate with findings documented by one of the recent met-analysis of studies done among factors influencing adolescent academic engagement which found that parental and peer influence were part of the other major factors like teacher-student relationship which highly influenced academic engagement among adolescents (Li & Xue, 2023).

This could account for higher proportions of Compassion International support beneficiaries with high academic engagement levels than their non-beneficiary counterparts indicated in the quantitative descriptive analysis. Though Compassion International support beneficiaries seemed to be exceptionally supported, factors that influence their academic engagement are

similar to what other studies found out in the western contexts. For instance, a mixed method study conducted on American adolescents revealed that teacher support, peer support, classroom and school structure were very important predictors of academic engagement variations (Fredricks et al., 2019).

Specifically, in a classroom environment where teachers gave positive feedback, students developed a better perception of competence and worked hard to accomplish their academic goals. A case study conducted on high school students in a low resource education setting in England, found that variations in academic engagement were influenced by active involvement into learning activities, supportive classroom and family environment among others (Devito, 2016). A systematic review of literature revealed that both parents, school and peers were agents of high engagement in learning and had great influence on how adolescents perceive competence (Ali & Hassan, 2018). The given statement holds theoretical relevance by highlighting the contextual similarities in factors influencing academic engagement among adolescent students in Kabale district, Southwestern Uganda and other Western contexts.

Despite the specific focus on Compassion International support beneficiaries in Uganda, some of the identified factors align with findings from studies in the West, emphasizing the generalizability of certain determinants of academic engagement across diverse cultural and educational settings. The findings contribute to a comprehensive understanding of the similarities and differences in factors shaping adolescents' perceptions of competence and engagement in learning. These context-based factors enrich the theoretical framework surrounding academic engagement, emphasizing the need for a nuanced understanding that transcends cultural and economic boundaries.

Parents and guardians expect their children to engage in academic work with the goal of education success during their school years. Teachers and peers are the main agents of support in the school context. However, from some of the narratives expressed by adolescent students, it is evident that they experience difficulty relating with teachers especially when they are branded as academic failures. It is critical for teachers to attend to students' individual differences and implement motivation strategies since external rewards were one of the major factors that influenced academic engagement.

The qualitative findings regarding teacher-student relationship as a key factor that enhances academic engagement agree with findings of the previous researchers such as Maaiké et al., (2021) who found that teacher-student relationship predicted adolescent students' engagement or disengagement in academic work. Similarly, among Chile adolescent students, teacher-student relationship predicted students' academic engagement. Students who received support from their teachers were likely to engage more than those who didn't (Pérez-Salas et al., 2021).

Teacher-student relationship perceived through feedback on academic outcomes, emotional support and general interaction influences students' self-efficacy and consequently academic engagement and outcomes. Moreover, quantitative findings revealed that adolescent students in Kabale district, Southwestern Uganda had moderate self-efficacy which consequently influenced academic engagement and achievement goal orientation (Appendix B, Table B.2). The qualitative and quantitative findings provide critical information needed for interventions to enhance academic engagement among

adolescents should giving special attention to establishing healthy teacher-student relationships and teacher positive behaviour.

5.6 Contribution of the Study

5.6.1 Contribution to Policy and Practice

In terms of achievement goal orientation, self-efficacy and academic engagement, the study has findings that inform policy makers on designing self-efficacy enhancement strategies to be integrated in normal teaching learning process for students. The stakeholders in charge of academic engagement and achievement of education goals will benefit from the study by coming up with strategies aimed at promoting achievement goal preferences that result in positive learning outcomes. Teacher training institutions and MOES responsible for retraining teachers will benefit from the study through designing and encouraging the teaching materials and environment that promotes self-efficacy and academic engagement through positive student-teacher relationships, mentorship and rewards that give students hope to attain higher education levels.

5.6.2 A reconstructed model for influences of Academic Engagement

This study makes significant contribution as regards achievement goal orientation and self-efficacy as predictors of academic engagement among secondary school students in Uganda. The study's findings significantly contribute to the existing literature by revealing a nuanced understanding of the interplay between achievement goal orientation, self-efficacy, and academic engagement. The identification of a full mediation effect of self-efficacy on the relationship between achievement goal orientation and academic engagement underscores the crucial role that self-efficacy plays in translating goal

orientation into meaningful academic engagement. Additionally, the recognition of a partial mediation effect suggests that other factors may contribute to the complex dynamics involved. The partial mediation attests to the qualitative findings which revealed that adolescents students' academic engagement was influenced by a number of factors including teacher-students relationship, external rewards, future career and employment prospects, parental/guardians expectations, goal setting training and mentorship offered by Compassion International (external support) mentorship attempts.

In addition to the quantitative findings, these context specific factors provide nuanced perspective and enhances our comprehension of the underlying mechanisms shaping students' academic engagement within low resource countries like Uganda thus adding to the body of knowledge that was previously generated within WIRED communities. The study reconstructed a conceptual framework (Figure 5.1), showing achievement goal orientation preferences, self-efficacy and other context-based factors that influence academic engagement.

Model Summary

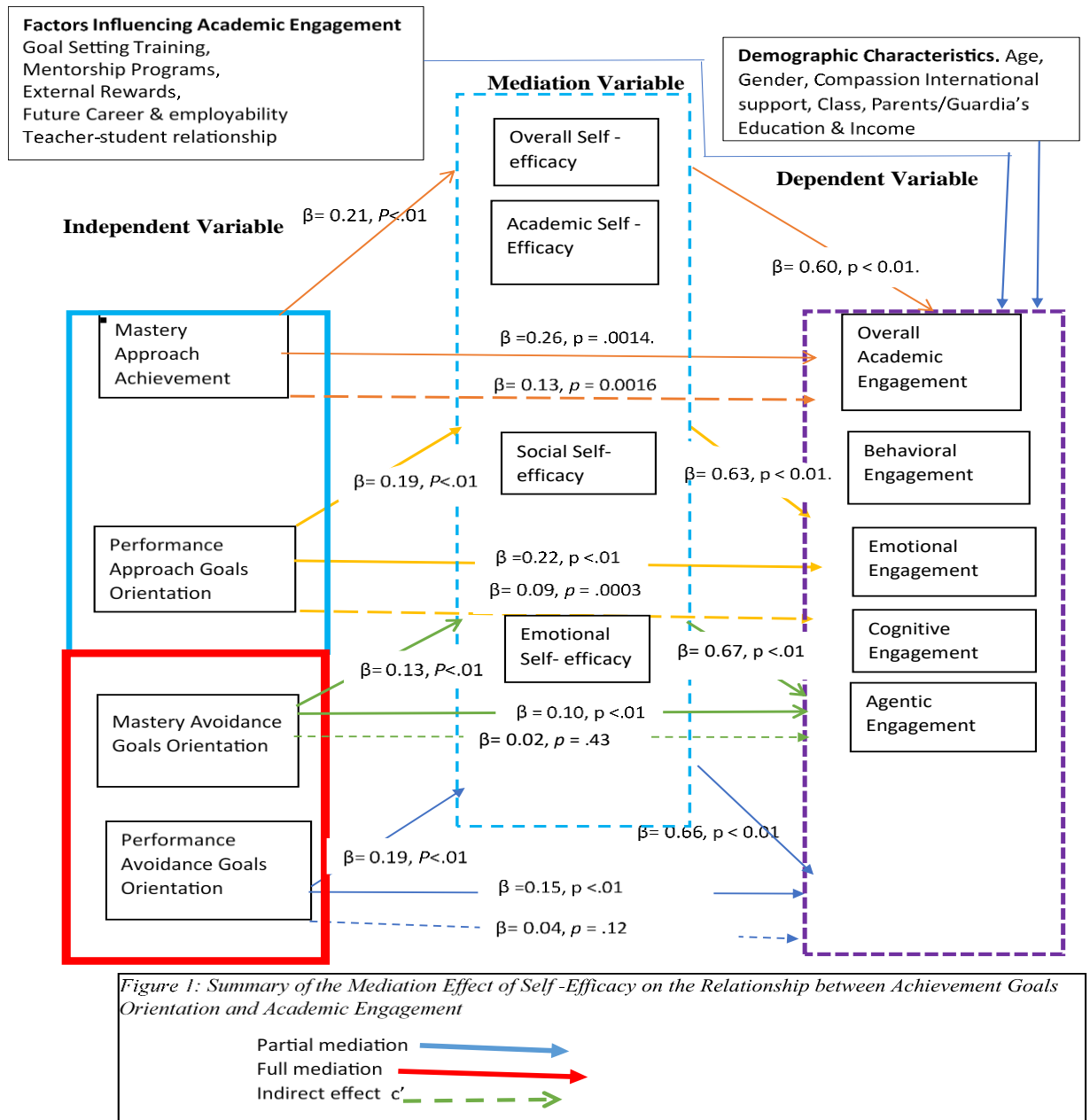


Figure 5. 1: Summary of the Factors that Influence Academic Engagement and the Mediation Effect of Self-efficacy on the Relationship between the Study Variables

From the model summary, the PROCESS macro regression analysis results indicated both partial and full mediation effect of overall self-efficacy on achievement goals and academic engagement. While overall self-efficacy partially mediates the relationship between approach goals and academic engagement it fully mediates avoidance goals and academic engagement. This suggests that approach goals (mastery and performance) independently predicts academic engagement positively but variation in academic engagement is much higher when self-efficacy is enhanced. However, avoidance goals (mastery and performance) have a weak positive effect on academic engagement and can indirectly have a strong effect on academic engagement through self-efficacy.

5.6.3 Contribution to the Body of Existing Knowledge

This research has produced three manuscripts in peer reviewed journals as follows;

1. Ndyareeba, E., Biirah, J., & Kibedi, H. K. (2024). Achievement of Goal Orientation and Academic Engagement among Adolescents in Southwestern Uganda. *East African Journal of Education Studies*, 7(2), 1–18. <https://doi.org/10.37284/eajes.7.2.1848>
2. Ndyareeba, E., Clay, Z., Biirah, J., & Kibedi, H. K. (2024). Student Gender and Support by Compassion International Influences Achievement Goal Orientation among Adolescents in South-western Uganda. *International Journal of Advanced Research*, 7(1), 213–230. <https://doi.org/10.37284/ijar.7.1.2161>

3. Ndyareeba, E. Biihah, J. Kibedi, H. & Clay, Z. (2024). Students' External Support and Demographic Factors as Differentials of Achievement Goal Orientation among Adolescent Students in Resource-Limited Environments. *East African Journal of Education Studies*, 7(4), 1–18. <https://doi.org/10.37284/eajes.7.4.2204>.

The insights in these publications will inform researchers, educationists and non-profit organisations that support education pursuit, parents and students on the predictors of academic engagement and other factors that influence it among adolescent students which can partly be addressed by interesting themselves in the recommendations that were suggested.

5.7 Strength of the Study

This study considered different adolescent students through the two levels of secondary school education in Uganda where critical engagement in academics is experienced as a basis for career choice in preparation for job market. The study sample was drawn from schools that include students that are supported by Compassion International to access education in schools that are meant for parents who can afford the school fees for comparison. This provided inclusive results that have leverage of generalization on academic engagement as it happens in the Ugandan secondary school education setting.

The study further included opinions from key informants, which supported the quantitative findings. In all categories, adequate sample size was elicited in respect of gender and compassion support. The findings therefore exhibit high power of generalizability and dependability. Finally, the adoption

of a mixed methods research approach was particularly useful in understanding and harmonizing the issues under study.

5.8 Conclusions and Recommendations

This chapter deliberates conclusions and recommendations, spelling out the new findings and their application and usefulness/significance.

5.8.1 Conclusion

The results of this study presented empirical evidence of the impact of demographic characteristics on adolescent students' achievement goal orientation adoption, self-efficacy and academic engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. When analysed against the four sub-scales of achievement goal orientation it was found that compassion support, school type, parents'/guardians' education and income accounted for variances in students' achievement goal orientation adoption. Compassion International support beneficiaries were more likely to adopt approach goals (mastery and performance) than their non-beneficiary counterparts. Adolescents in government schools and those whose parents/guardians income and education level were low endorse product-oriented learning approach. The qualitative analysis revealed that the external support offered by Compassion International is not limited to the provision of financial support but includes mentorship programs, goal setting skills, medical services and offer motivational rewards which significantly influences variations in achievement goals adoption and academic engagement among the study samples.

This study concludes that various demographic characteristics influence academic self-efficacy levels among adolescent students in Kabale district,

Southwestern Uganda. For example, younger adolescents generally had higher academic self-efficacy, male participants were slightly more likely to have high academic self-efficacy than female participants. The results also indicate that participants who are beneficiaries of Compassion International support have higher academic self-efficacy, as do participants whose parents have higher levels of education and income. Overall interventions aimed at improving academic self-efficacy may need to take these factors into account.

This study also concludes that the influence of demographic characteristics on academic engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda: specifically, age, gender, Compassion International support, adolescent parents' education and income levels. Regarding academic engagement subconstructs, adolescent students in this study portrayed high behavioural engagement (observable actions and behaviours that demonstrate their involvement in learning activities, such as participating in class discussions, completing assignments, and attending classes regularly) and cognitive engagement (investment in mental effort and active thinking into their learning). However, there were low proportion of adolescents with high emotional engagement (attaching positive emotions and enthusiasm towards learning) and agentic engagement (having a sense of control and autonomy, and agency in their learning).

In the Ugandan education context where education is said to be a key to success and learners take it as a mandatory responsibility, it is not surprising that there were high proportions of participants with high behavioural and cognitive engagement levels than those with emotional and agentic engagement. Furthermore, issues of learning are taken as a serious matter that determine

one's success in life, so learners especially in low resource education settings may hardly attach enjoyment to it. The low proportions of participants with high agentic engagement can be explained by the fact that in the Ugandan education system, a teacher is referred to as a master of the predetermined curriculum content necessary for passing examinations, so students may hardly take ownership of their education and may not set personal goals for learning.

The study concludes that achievement goal orientation and self-efficacy, achievement goal orientation and academic engagement, and self-efficacy and academic engagement are positively associated to different extents. Moreover, self-efficacy is strongly associated with academic engagement. The strongest correlation was between behavioural, cognitive and agentic engagement respectively while there was a moderate positive association between self-efficacy and emotional engagement. The study furthermore concludes that there is a moderate positive correlation between approach goals and overall academic engagement and a very weak positive correlation between avoidance goals and academic engagement. The complex variations in the relationships between the study variables are critical for example, the strong positive relationship between self-efficacy and academic engagement is justified because the stronger one's belief in their potential to succeed at a given academic task, the more the likelihood of the individual excelling at the same.

The study further concludes that, an achievement goal orientation type adopted by a student and the strength of belief a student has in him/herself succeeding in academic pursuit predicts their academic engagement levels. This implies that certain achievement goal orientation types and particular self-efficacy sub-constructs are responsible for the prediction. Specifically, mastery

approach achievement goal orientation, social self-efficacy and academic self-efficacy significantly predict overall academic engagement. An adoption of mastery achievement goal orientation enables a student to persistently commit to learning despite the difficulty in leading to the realisation of positive education outcomes. An individual's confidence in their ability to set and achieve academic goals, master complex subjects, and overcome academic challenges (academic self-efficacy) plus an individual's belief in their own ability to effectively interact with others, navigate social situations, and achieve positive academic outcomes in interpersonal relationships (social self-efficacy) predicts high academic engagement. All students regardless of background, age, gender, socioeconomic status, have the potential to successfully engage academically as long as they have a strong belief in their ability to succeed in learning the given content.

The study concludes that self-efficacy is a critical mechanism through which achievement goal orientation adoption can affect academic engagement levels among adolescent students. Specifically, approach goal orientation (mastery and performance) can predict academic engagement levels independently but the variation in academic engagement is much higher when students' self-efficacy is enhanced. On the contrary, avoidance goals (mastery and performance), have a very weak positive effect on academic engagement. Self-efficacy fully minimises the negative effects of avoidance goals (performance and avoidance) on academic engagement since it fully mediates the relationship. It's worth noting that the small sample size of this study (indicated by the narrow 95% bootstrap confidence interval of the coefficients) may limit the generalizability of these findings. Overall, the findings of this

research provide education stakeholders with valuable insights into the factors that influence academic engagement and suggest potential strategies for improving student study outcomes.

The study finally concludes that context-specific and culturally entrenched factors influence academic engagement variations among adolescent students in secondary schools. Compassion International support system encourages their beneficiaries to adopt approach goal orientations through provision of mentorship opportunities, goal setting training and external rewards but beneficiaries also personally determine to master content leading to excellence while aiming at getting well-paying jobs to enable them improve the economic status of their families. Both Compassion International support beneficiaries and non- beneficiaries attribute their academic engagement to future employability, teacher-student relationship, parents/guardians' expectations and external rewards. The adoption of achievement goals and engaging in academics is explained by both the self-determination theory (SDT) by (Deci and Ryan, 2008) and Social Cognitive Theory (SCT) by Bandura (1977), which complementarily explain a combination of self-determine goals, result in the motivation for self-skill enhancement in academic engagement while considering the role played by the environmental factors.

5.8.2 Recommendations

Based on the discussion and conclusions of this study, the following recommendations are made in accordance with the study objectives, research hypotheses and the research question. These suggestions may be useful to school stakeholders and non-profit organisations that offer education support, parents, teachers, policymakers and curriculum developers and researchers focusing on academic engagement enhancement.

5.8.2.1 School Stakeholders

The study recommends school administrators to take responsibility of ensuring that teachers have access to ongoing professional development opportunities that will enhance their capacity to form healthy relationships with their students, provide mentorship, implement goal setting training and give learners positive feedback to enhance their self-efficacy.

5.8.2.2 Intervention for Parents

The study recommends sensitization of parents and guardians on the need for a student-supportive environment that allows independence regarding achievement goal orientation adoption. In this way, parents will be helped to realize the need for children to make personal academic goals that are aiming at self-skill enhancement other than unhealthy competition.

5.8.2.3 Evaluation of Uganda National Curriculum Development Centre (UNCDC) Study Content

The study recommends that UNCDC should re-evaluate the criteria of judging the knowledge acquisition and mastery of the content taught in secondary schools. Despite the current competence-based curriculum that has been introduced in lower secondary schools, grading of learners is still dependent on

examination scores which may not necessarily be an accurate indicator of content mastery. Such grading perpetuates avoidance goals adoption where students avoid academic content that they deem difficult and may portray them as incompetent. Inclusion of emotional and social support programs in the curriculum is vital for mitigation of learning anxiety and enhancement of product-oriented goals.

5.8.2.4 The Need for peer support Involvement in Academic Engagement Enhancement Drive through Self-Efficacy Building

The study suggests that creating awareness of the importance of peer support in the enhancement of self-efficacy is critical. This will help students to appreciate the importance of building one another's confidence in academic work despite the difficulty. In a way this might help to minimize the tendency of students to opt for academic content which they deem simple and avoid what they deem difficulty (avoidance goals) due to fear of being ridiculed and branded by their peers as incompetent. Students who adopt mastery avoidance goals engage in surface learning which is aimed at attaining scores that depict one as a competent person, which may not necessarily be the case. Through peer support, students will be assured that inability to master certain academic aspects does not necessarily mean incompetence but rather an opportunity to inquire and understand better. This can be achieved through various means such as providing students with group projects that are challenging yet achievable and peer positive feedback.

5. 8.2.5 Teachers and Policy Makers

We recommend that teachers, parents and all stakeholders adopt support systems implemented by Compassion International like mentorship; goal setting

training, positive feedback and confidence building to help learners focus on self-skill enhancement for lifelong learning outcomes. School administrators could adopt strategies from compassion international support system to create conducive environment that enhances learners' achievement goal choices, self-efficacy and academic engagement.

Additionally, interventions that aim to enhance self-efficacy may be beneficial for improving academic engagement. Education stakeholders can use the findings of this research to inform their practices and interventions aimed at improving academic engagement among students. They can focus on fostering overall self-efficacy beliefs among students as this was found to be a strong and significant predictor of academic engagement. For example, building positive teacher-student relationships and providing teachers with funded refresher trainings regarding confidence building both for themselves and students.

5.9 Limitations

The present study was limited to secondary schools that collaborate with Compassion International to admit students from low socio-economic status backgrounds at a subsidized school fees cost. Thus, the study findings have limited understanding of the outcome effects achievement goal orientation, self-efficacy and other context-based factors on academic engagement among students in other secondary schools. In terms of methodology, the study used a cross-sectional research design which could not address academic engagement variations 100%. This was because the study was time bound and resource constrained. Therefore, a longitudinal research survey is recommended to fill some gaps that can only be filled by such.

This study could have been richer and more informative if samples were gathered from across broader regions of Uganda. This would have included the academic engagement aspect in other Ugandan learning contexts like within the capital city. However, due to the nature of random sampling, the Southwestern region was taken as a priority since the region faces severe poverty-related issues, like any other rural areas in Uganda. As a result, views from the central area would have provided a more balanced picture of Uganda.

5.10 Future Directions

The study focused on self-efficacy as a mediator between achievement goal orientation and academic engagement among adolescents in secondary school within low socio-economic status setting. In a way this study did not consider self-efficacy as a moderator, adolescent students in primary schools and those who branch to tertiary institutions and vocational training as this was beyond the study scope. Therefore, the study suggests further research on a longitudinal study to examine what could influence successful academic engagement at different developmental stages considering children and adolescents who divert to vocational learning institutions. Further research should also focus on self-efficacy as a potential moderator between achievement goal orientation and academic engagement.

REFERENCES

- Abubakr, A. (2018). Students' engagement in relationship to academic performance. *Journal of Education and Social Sciences*, 8(1), 5–9.
https://www.jesoc.com/wp-content/uploads/2017/11/JESOC8_201.pdf
- Acharya, A., & Nayak, M. (2018). Analysis of achievement motivation and coping strategies among university athletes. *Behavioural Sciences*. 3(2), 692–695.
- Alfons, A., Ateş, N. Y., & Groenen, P. J. F. (2022). A Robust Bootstrap Test for Mediation Analysis. *Organizational Research Methods*, 25(3), 591–617. <https://doi.org/10.1177/1094428121999096>
- Alhadabi&, & Karpinski. (2020). Grit, self-efficacy, achievement orientation goals, and academic performance in university students. *International Journal of Adolescence and Youth*, 25(1), 519–535.
<https://doi.org/10.1080/02673843.2019.1679202>
- Ali, M. M., & Hassan, N. (2018). Defining concepts of student engagement and factors contributing to their engagement in schools. *1956*, 2161–2170.
<https://doi.org/10.4236/ce.2018.914157>
- Alrashidi, O., Phan, H. P., & Ngu, B. H. (2016). Academic engagement: An overview of its definitions, dimensions, and major conceptualisations. *International Education Studies*, 9(12),
<https://doi.org/10.5539/ies.v9n12p41>
- Amir, R., Saleha, A., Jelas, Z. M., Ahmad, A. R., & Education, F. (2014). Students ' engagement by age and gender : A cross-sectional study in malaysia. *21(10)*, 1886–1892.
<https://doi.org/10.5829/idosi.mejsr.2014.21.10.85168>

- Armum, P., & Chellappan, K. (2016). Social and emotional self-efficacy of adolescents: measured and analysed interdependencies within and across academic achievement level. *International Journal of Adolescence and Youth*, 21(3) <https://doi.org/10.1080/02673843.2015.1067894>
- Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools*, 45(5), 369–386. <https://doi.org/10.1002/pits.20303>
- Atibuni, D. Z., Kibanja, G. M., Olema, D. K., & Ssenyonga, J. (2017). Challenges and strategies of research engagement among master of education students in Uganda. *International Journal of Educational Policy Research and Review*, 4(3), 19–28. <https://doi.org/10.15739/IJEPRR.17.004>
- Badamasi, I., & University, B. (2020). Analysis of gender difference in academic self- efficacy and achievements among senior secondary school students in niger state , nigeria. 5(3), 659–675.
- Bandura, A., Barbaranelli, C., & Pastorelli, C. (1996). Multifaceted impact on self-efficacy beliefs on academic functioning. *Child Development* 67 (3), 1206–1222. [http://limks.jstor.org/sici?sici=0009-3920\(199606%25](http://limks.jstor.org/sici?sici=0009-3920(199606%25)
- Braun, V., & Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3 (2). <http://dx.doi.org/10.1191/1478088706qp063oa>
- Braun, V. (2014). Successful Qualitative Research: A practical guide for beginners' successful qualitative research a practical guide for beginners. Retrieved from file:///C:/Users/araks/Downloads/SQRChap1Research

Repository.pdf on 22/12/2023.

- Bukhari, S. A. R. (2021). Sample Size Determination Using Krejcie and Morgan Table. *Kenya Projects Organization (KENPRO), February*, 607–610. <https://doi.org/10.13140/RG.2.2.11445.19687>
- Beri, N., & Akhoon, A. (2021). Emotional self- efficacy among senior secondary school students : *An Exploratory Study of Kashmir. February*.
- Camp, R., & Surum, J. (2018). Student academic engagement and the academic achievement of form one students in dadaab. *II(Xii)*, 575–582.
- Campos, J. G., Piola, T. S., & Campos, W. De. (2019). Social support, self- efficacy and level of physical activity of students aged 13-15 years. *Brazilian Journal of Cineanthropometry and Human Performance*. 2019, 21: E58684. <https://doi.org/DOI: dx.doi.org/10.1590/1980-0037.2019v21e58684>
- Çapri, B., Gündüz, B., & Akbay, S. E. (2017). Utrecht work engagement scale-student forms' (UWES-SF) adaptation to Turkish, validity and reliability studies, and the mediator role of work engagement between academic procrastination and academic responsibility. *Educational Sciences in Theory and Practice*, 17(2), 411–435. <https://doi.org/10.12738/estp.2017.2.0518>
- Castillo, J. C. D., Pinugu, J. N. J., Bernabe, A. L. Q., & Pasay, S. J. M. M. (2020). Achievement goal orientation, self-efficacy, and classroom climate as predictors of writing performance of Filipino senior high school students. *Asian EFL Journal*, 27(32), 83–107.
- Chang, D., & Chien, W. C. (2015). Determining the relationship between academic self-efficacy and student engagement by meta-analysis.

Proceedings of the 2015 International Conference on Education Reform and Modern Management, 15(Ermm), 142–145.

<https://doi.org/10.2991/ermm-15.2015.37>

Chen, D., & Fritz, M. S. (2022). Corrected bootstrap test of mediation. 44(4), 416–427. <https://doi.org/10.1177/01632787211024356>.

Chen, P., Bao, C., & Gao, Q. (2021). Proactive personality and academic engagement: The mediating effects of teacher-student relationships and academic self-Efficacy. *Frontiers in Psychology*, 12(June), 1–8. <https://doi.org/10.3389/fpsyg.2021.652994>

Cheng, Y. (2020). Academic self-efficacy and assessment. In *Educational Psychology* 40 (4), 389–391).

<https://doi.org/10.1080/01443410.2020.1755501>

Chiu, T. K. F. (2021). Applying the self-determination theory (SDT) to explain student engagement in online learning during the COVID-19 pandemic. *Journal of Research on Technology in Education*, 0(0), 1–17. <https://doi.org/10.1080/15391523.2021.1891998>

Christenson, S. L., Wylie, C., & Reschly, A. L. (2012). Handbook of research on student engagement. <https://doi.org/10.1007/978-1-4614-2018-7>

Cottrell, C. (2018). Self-Efficacy, implicit theories of ability, and 2 x 2 achievement goal orientation: A Mediation Analysis in Collegiate Athletics.

Creswell, J. W., & Poth, C. N. (2018). *Research design: Qualitative, quantitative and mixed methods design* (Fifth Edit). Sage.

- Curtis, J., Alexa, C. (2015) "Defining adolescence, " *Journal of Adolescent and Family Health: 7(2)*. Available at:
<http://scholar.utc.edu/jafh/vol7/iss2/2CORE>.
- Davis, M. C. (2019). First-Year students background and academic achievement: The mediating role of student engagement. *10* (December).
<https://doi.org/10.3389/fpsyg.2019.02669>
- Deci, E. L., Ryan, R. M., Vallerand, R. J., & Pelletier, L. G. (1991).
Motivation and education: The self-determination perspective.
Educational Psychologist, 26(3–4), 325–346.
<https://doi.org/10.1080/00461520.1991.9653137>
- Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology, 49(3)*, 182–185. <https://doi.org/10.1037/a0012801>
- Delfino, A. P. (2019). Student engagement and academic performance of students of Partido State University. *Asian Journal of University Education, 15(1)*, 22–41. <https://doi.org/10.24191/ajue.v15i3.05>
- Devito, M. (2016). Factors influencing student engagement. *Factors influencing student engagement, 91*. <http://digitalcommons.sacredheart.edu/edl/11>
- Dogan, U. (2015). Student engagement, academic self-efficacy, and academic motivation as predictors of academic performance. *Anthropologist, 20(3)*, 553–561. <https://doi.org/10.1080/09720073.2015.11891759>
- Duchesne, S., Larose, S., & Feng, B. (2019). Achievement goals and engagement with academic work in early high school: Does seeking help from teachers matter? *Journal of Early Adolescence, 39(2)*, 222–252.
<https://doi.org/10.1177/0272431617737626>

- Dullas, A. R. (2018). The Development of academic self-efficacy scale for Filipino junior high school students. *Frontiers in Education*, 3(April), 1–14. <https://doi.org/10.3389/feduc.2018.00019>
- Earl, S. R., Taylor, I.M, Meijen, C and Passfield, L (2023). Trajectories in cognitive engagement, fatigue, and school achievement: The role of young adolescents' psychological need satisfaction. *Learning and Individual Differences*.101(2023), doi.org/10.1016/j.lindif.2022.102248
- Elliot, A. J., & Harackiewicz, J. M. (2015). Approach and avoidance achievement goals and intrinsic motivation: A mediational analysis approach and avoidance achievement goals and intrinsic motivation. February. <https://doi.org/10.1037/0022-3514.70.3.461>
- Elliot, A. J., & McGregor, H. A. (2001). A 2 × 2 achievement goal framework. *Journal of Personality and Social Psychology* 80 (3). <https://doi.org/10.1037//0022-3514.80.3.501>
- Elliot, A. J., Murayama, K., & Pekrun, R. (2011). A 3 × 2 achievement goal model. *Journal of Educational Psychology*, 103(3), 632–648. <https://doi.org/10.1037/a0023952>
- Erdem-Keklik, D., & Keklik, İ. (2013). Exploring the factor structure of the 2x2 achievement goal orientation scale with high school students. *Procedia - Social and Behavioural Sciences*, 84(Zimmerman 1990), 646–651. <https://doi.org/10.1016/j.sbspro.2013.06.619>
- Erturan, G., McBride, R., & Agbuga, B. (2020). Self-regulation and self-efficacy as mediators of achievement goals and leisure time physical activity: A proposed model. *Pedagogy of Physical Culture and Sports*,

24(1), 12–20. <https://doi.org/10.15561/18189172.2020.0102>

Fakhrou, A., & Habib, L. H. (2021). The relationship between academic self-efficacy and academic achievement in students of the department of special education. *International Journal of Higher Education*, 11(2), 1. <https://doi.org/10.5430/ijhe.v11n2p1>

Fallan, L., & Opstad, L. (2016). Student self-efficacy and gender-personality interactions. *International Journal of Higher Education*, 5(3), 32–44. <https://doi.org/10.5430/ijhe.v5n3p32>

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59–109. <https://doi.org/10.3102/00346543074001059>

Fredricks, J. A., & Mccolskey, W. (2018). The Measurement of Student Engagement: A Comparative Analysis of Various Methods and Student Self-report Instruments. *Springer Science Business Media*, LLC 2012 763. <https://doi.org/10.1007/978-1-4614-2018-7>

Fredricks, J. A., Parr, A. K., Amemiya, J. L., Wang, M., & Brauer, S. (2019). What matters for urban adolescents' engagement and disengagement in school: A mixed-methods study. *Journal of Adolescent Research*, 34(5), 491–527. <https://doi.org/10.1177/0743558419830638>

Gerbino, M. (2020). Self-efficacy. *The wiley encyclopaedia of personality and individual differences*, 1994, 387–391. <https://doi.org/10.1002/9781119547174.ch243>

- Gimeno-Gilles, C., Lelièvre, E., Viau, L., Malik-Ghulam, M., Ricoult, C., Niebel, A., Leduc, N., Limami, A. M., Schmidt-Lebuhn, A. N., Fuchs, J., Hertel, D., Hirsch, H., Toivonen, J., Kessler, M., Loureiro, J., Lavania, U. C. U. C., Srivastava, S., Lavania, S., Basu, S., Yao, J. L. (2016). Self-Efficacy and goals orientation and their association with academic achievement. *Euphytica*, *18*(2).
<http://dx.doi.org/10.1016/j.jplph.2009.07.006>
- Glaphathi, I., Dissanayake, R., Welgama, T., Somachandara, U., Weerathna, R. S., & Pathirana, G. Y. (2019). A study on the relationship between student engagement and their academic achievements. *Asian Social Science*, *15*(11), <https://doi.org/10.5539/ass.v15n11p1>
- Groves, M., Sellars, C., Smith, J., & Barber, A. (2015). Factors affecting student engagement: A case study examining two cohorts of students attending a post-1992 university in the United Kingdom. *International Journal of Higher Education*, *4*(2), 27–37. <https://doi.org/10.5430/ijhe.v4n2p27>
- Guay, F. (2022). Applying self-determination theory to education: Regulations types, psychological needs, and autonomy supporting behaviours. *Canadian Journal of School Psychology*, *37*(1), 75–92. <https://doi.org/10.1177/08295735211055355>
- Hanum, W., Mohamed, W., Madya, P., & Nordin, J. (2017). Self-Efficacy and academic performance of secondary schools' students in Perak: *An Exploratory Outlook*. *6*(3), 41–55. <https://doi.org/10.6007/IJARPED/v6-i3/3081>

- Harackiewicz, J. M., & Elliot, A. J. (1993). Achievement Goals and Intrinsic Motivation. *Journal of Personality and Social Psychology*, 65(5), 904–915.
<https://doi.org/10.1037/0022-3514.65.5.904>
- Hayat, A. A., Shateri, K., Amini, M., & Shokrpour, N. (2020). Relationships between academic self-efficacy, learning-related emotions, and metacognitive learning strategies with academic performance in medical students: A structural equation model. *BMC Medical Education*, 20(1), 1–11. <https://doi.org/10.1186/s12909-020-01995-9>
- Hayes, A. F., & Rockwood, N. J. (2020). Conditional process analysis: Concepts, computation, and advances in the modeling of the contingencies of mechanisms. *American Behavioural Scientist*, 64(1), 19–54. <https://doi.org/10.1177/0002764219859633>
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioural and Brain Sciences*, 33(2–3), 61–83.
<https://doi.org/10.1017/S0140525X0999152X>.
- Heo, H., Bonk, C. J., & Doo, M. Y. (2021). Enhancing learning engagement during COVID -19 pandemic: Self-efficacy in time management, technology use, and online learning environments. *Journal of Computer Assisted Learning*. <https://doi.org/10.1111/jcal.12603>
- Ho, M. C., Fitriana, M., & Govindasamy, V. (2021). Self-efficacy and achievement among malaysian university: Influence of parental income and encouragement on academic self-efficacy and achievement among malaysian university. *International Journal of Education*. December.
<https://doi.org/10.35631/ijepc.644007>

- Honicke, T., Broadbent, J., & Fuller-Tyszkiewicz, M. (2020). Learner self-efficacy, goal orientation, and academic achievement: exploring mediating and moderating relationships. *Higher Education Research and Development*, 39(4), 689–703.
<https://doi.org/10.1080/07294360.2019.1685941>
- Horanicova, S., Husarova, D., Geckova, A. M., Winter, A. F. De, & Reijneveld, S. A. (2022). Family socioeconomic status and adolescent school satisfaction : Does schoolwork support affect this association ? *13(1)*, 1–8. <https://doi.org/10.3389/fpsyg.2022.841499>
- Hussain Ch., A., Malik, M., Fatima, G., & Abid, U. (2017). Secondary school students' socio economic status, mathematics self-concept and achievement goal orientations: A correlational investigation. *Bulletin of Education and Research*, 39(1), 215–227.
<http://login.ezproxy.ub.unimaas.nl/login?url>
- Inggis, P. B. (2016). Student's cognitive engagement in learning process. *5(2)*, 48–51.
- Ileri, A . M. (2015). Academic identity status and achievement goal orientation as predictors of academic achievement among form three students in Embu County, Kenya. *Angewandte Chemie International Edition*, 6(11), 951–952.
- Ileri, A . M., Mwangi, C. N., Mwaniki, E. W., & Wambugu, K. (2021). Cognitive psychology achievement goals orientation as predictors of academic achievement among secondary school students in Embu County, Kenya. *International Journal of School Psychology*.

<https://doi.org/10.35248/2329-8901.19.7.215>.

- Jamil, N. U. R. A. (2018). Differences in student self-efficacy by gender. *International journal for educational studies*, 11(1).
- Jeniffer, B. (2016). School socio-economic status and student socio-academic achievement goals in upper sec.<http://dx.doi.org/10.1007/s11218-015-9324-8> *School Socio-Economic Status and Student Socio-Academic Achievement Goals in Upper Secondary Contexts*, 19(1), 175–194.
- Jowi, J. O., & Obamba, M. (2013). Research and Innovation Management: Comparative Analysis of Ghana, Kenya, Uganda. Programme on Innovation, Higher Education and Research for Development (IHERD). http://www.oecd.org/sti/Session_3_Advanced_draft_not_copiedited_Research_and_Innovation_Management_Comparative_Analysis.pdf
- National Survey of Students Engagement (2020). Laurentian University NSSE Engagement Indicators Report. 1-18.
- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *The academy of management journal*, 33(4), 692–724. <https://doi.org/https://doi.org/10.2307/256287>
- Kaushik, V., & Walsh, C. A. (2019). Pragmatism as a research paradigm and its implications for social work research. *Social Sciences*, 8(9), 1–17. <https://doi.org/doi:10.3390/socsci8090255>
- Kim, Y., Kim, K., & Lee, S. (2017). Testing the self-efficacy questionnaire with Korean children in institutionalized care. 27(6), 734–742. <https://doi.org/10.1177/1049731515606219>

- Kim, J. I., de Long, S. P. A., Gorelik, W., Penwell, K., Donovan, C., & Chung, H. (2020). Family orientation and achievement goal orientations among the children of immigrant and non-immigrant families. *International Journal of Educational Psychology*, 9(2), 132–160.
<https://doi.org/10.17583/ijep.2020.4422>
- Kong, H., Wang, G., Cheng, D., & Li, T. (2023). The impact of adolescent achievement goal orientation on learning anxiety : The mediation effect of peer interaction. *Frontiers in Psychology*, March, 1–13.
<https://doi.org/10.3389/fpsyg.2023.1095498><https://doi.org/10.3389/fpsyg.2023.1095498>
- Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24(1), 120–124.
<https://doi.org/10.1080/13814788.2017.1375092>
- Kösterelioğlu, İ. (2018). Effects of parenting style on students' achievement goal orientation: A study on high school students. *Educational Policy Analysis and Strategic Research*, 13(4), 91–107.
<https://doi.org/10.29329/epasr.2018.178.5>
- Kuok, A. C. H., & Taormina, R. J. (2017). Work engagement: Evolution of the concept and a new inventory. *Psychological Thought*, 10(2), 262–287.
<https://doi.org/10.5964/psyct.v10i2.236>
- Larsson, K., & Regborn, F. (2019). The relative age effect on self-esteem in the academic setting. Retrieved from chrome-extension://efaidnbmnnnibpcajpcglefindmkaj/<https://www.diva-portal.org/smash/get/diva2:1318980/FULLTEXT01.pdf> on 30/12/2023.

- Lee, J., Allen, J., Lim, H., Choi, G., & Jung, J. (2022). The moderating effect of age on low-income students' relationships with mentors and their self-efficacy since COVID-19. *Frontiers in Psychiatry, 13*(April), 1–7. <https://doi.org/10.3389/fpsyt.2022.800385>
- Li, J., & Xue, E. (2023). Dynamic interaction between student learning behaviour and learning environment : Meta-Analysis of student engagement and its influencing Factors. *Behavioural Sciences, 59*(13). <https://doi.org/https://doi.org/10.3390/bs13010059>
- Lin, X. (2019). Achievement goals orientation as predictors of self-regulated learning strategies of international ELS students. *International Journal of Teaching and Learning in Higher Education, 31*(2), 214–223.
- Lin, T. J. (2021). Exploring the differences in Taiwanese university students' online learning task value, goals orientation, and self-efficacy before and after the COVID-19 Outbreak. *Asia-Pacific Education Researcher, 30*(3), 191–203. <https://doi.org/10.1007/s40299-021-00553-1>
- Liu, Q., Du, X., & Lu, H. (2022). Teacher support and learning engagement of EFL learners: The mediating role of self-efficacy and achievement goal orientation. *Current Psychology, 26*19–2635. <https://doi.org/10.1007/s12144-022-04043-5>
- Lochbaum, M., Zazo, R., Çetinkalp, Z. K., Wright, T., Graham, K. A., & Konttinen, N. (2016). A meta-analytic review of achievement goal orientation correlates in competitive sport. *Kinesiology, 48*(2), 159–173. <https://doi.org/10.26582/k.48.2.15>

- Mansor, N.B., & Sawali, S. (2013). A study of student's general self-efficacy related to gender differences. *International Journal of Informative and Futuristic Research*, 1(4), 62–67.
- Markowitz, A. J. (2017). Associations between emotional engagement with school and behavioural and psychological outcomes across adolescence. 3(3), <https://doi.org/10.1177/2332858417712717>
- Martín, A. B. B., Pérez-Fuentes, M. D. C., Jurado, M. D. M. M., Martínez, Á. M., Márquez, M. D. M. S., Sisto, M., & Linares, J. J. G. (2021). Emotional intelligence and academic engagement in adolescents: The mediating role of self-esteem. *Psychology Research and Behaviour Management*, 14, 307–316. <https://doi.org/10.2147/PRBM.S302697>
- Mascret, N., Elliot, A. J., & Cury, F. (2017). The 3 × 2 Achievement goal questionnaire for teachers. *Educational Psychology*, 37(3), 346–361. <https://doi.org/10.1080/01443410.2015.1096324>
- Meilstrup, C., Holstein, B. E., Nielsen, L., Due, P., & Koushede, V. (2019). *Self-efficacy and social competence reduce socioeconomic inequality in emotional symptoms among schoolchildren*. 80–85. <https://doi.org/10.1093/eurpub/ckz058>
- Meng, Q., & Zhang, Q. (2023). The influence of academic self-efficacy on university students' academic performance: The mediating effect of academic engagement. *Sustainability (Switzerland)*, 15(7). <https://doi.org/10.3390/su15075767>
- Monteiro, D., Teixeira, D. S., Travassos, B., Duarte-Mendes, P., Moutão, J., Machado, S., & Cid, L. (2018). Perceived effort in football athletes: The role of achievement goal theory and self-determination theory. *Frontiers*

in *Psychology*, 9(AUG), 1–13. <https://doi.org/10.3389/fpsyg.2018.01575>

- Montenegro, A. (2017). Understanding the concept of student agentic engagement for learning. *Colombian Applied Linguistics Journal* 19 (1). 117-128. <http://dx.doi.org/10.14483/calj.v19n1.10472>
- Morrison, L., & Schoon, I. (2018). Emotional engagement , educational aspirations , and their association during secondary school Emotional engagement , educational aspirations , and their association during secondary school. *Journal of Adolescence*, 67(July). <https://doi.org/10.1016/j.adolescence.2018.05.014>
- Muiga, W. J. (2019). Emotional intelligence and academic self-efficacy beliefs as predictors of academic achievement among form four students in Kiambu County, Kenya. Skripsi.
- Mugisha, L. (2021). Compassion International’s contribution to education in Uganda.
- Mugizi, W., Rwothumio, J., & Kanyesigye, J. (2020). Teacher-centred pedagogical approach and student engagement at a private university in Western Uganda. *Journal of Educational Research and Reviews*, 8(8), 128–137. https://doi.org/10.33495/jerr_v8i8.20.154
- Maguire, M., & Delahunt, B. (2017). Doing a thematic analysis: a practical, step-by-step guide for learning and teaching scholars. *All Ireland Journal of Teaching and Learning in Higher Education* 8(3). <https://doi.org/http://ojs.aishe.org/index.php/aishe-j/article/view/335>
- Muris, P. (2007). Measure - The self-efficacy questionnaire for children. *Journal of Psychoeducational Assessment*, 25(4), 341–355.
- Musa, A. K. J., Dauda, B., & Umar, M. A. (2016). Gender differences in

achievement goals and performances in english language and mathematics of senior secondary schools students in Borno State, Nigeria. *Journal of Education and Practice*, 7(27), 165–175.

www.iiste.org

Mythili, C. &. (2020). Self-esteem, Self-efficacy and Academic performance among Adolescents. *Indian Journal of Child and Adolescent Mental Health*. 16(2):123-135, 16(2), 123–135.

Nabavi, R. T. (2014). Theories of developmental psychology title : Bandura ' s Social Learning Theory & Social Cognitive Learning Theory Razieh Tadayon Nabavi. *November*.

Naite, I. (2021). Impact of parental involvement on children ' s academic performance at crescent international impact of parental involvement on children ' s academic performance at crescent international school , Bangkok , Thailand. *Earth and Environmental Science*.

<https://doi.org/10.1088/1755-1315/690/1/012064>

Nako, N. (2016). Factors influencing academic engagement and achievement: Exploration of impact of parentification and poverty in adolescents' student-teacher relationships. *Dissertation Abstracts International*, 76(10-A(E), Seft. <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&D=psyc12&AN=2016-16231->

Ng'ang'a, M. & Dinga, J.N. (2018). Relationship between achievement goal orientation and academic achievement among form three students in Kiambu county, Kenya I Maria Wacera Ng'ang'a (Corresponding Author). 6(4)

- Nasir & Iqbal. (2019). Academic self-efficacy as a predictor of academic achievement of students in preservice teacher training programs. *Bulletin of Education and Research*, 41(1), 33–42.
- National Survey of Students Engagement (2020). Laurentian University NSSE Engagement Indicators Report. 1-18.
- Nazarieh, M. (2015). A brief history of achievement goals orientations theory and its development. *BEST: Journal of Humanities, Arts, Medicine and Sciences*, 1(2), 49–58.
- Newton, N., & Cundy, J. M. (1983). The ultimate goal? 38(9), 906–906. <https://doi.org/10.1111/j.1365-2044.1983.tb12264.x>
- Nielsen, M., Haun, D., Kärtner, J., & Legare, C. H. (2017). The persistent sampling bias in developmental psychology: A call to action. *Journal of Experimental Child Psychology*, 162, 31–38. <https://doi.org/10.1016/j.jecp.2017.04.017>.
- Nyakato, V. N., Achen, C., Chambers, D., Kaziga, R., Ogunnaya, Z., Wright, M., & Kools, S. (2021). Very young adolescent perceptions of growing up in rural Southwest Uganda: Influences on sexual development and behaviour. *African Journal of Reproductive Health*, 25(2), 50–64. <https://doi.org/10.29063/ajrh2021/v25i2.5>
- Jowi, J. O., & Obamba, M. (2013). Research and Innovation Management: Comparative Analysis of Ghana, Kenya, Uganda. Programme on Innovation, Higher Education and Research for Development (IHERD). DOI: <https://doi.org/10.1787/9789264201170-10>
- Olana, E. and Tefera, B (2022) Family, teachers and peer support as predictors of school engagement among secondary school Ethiopian adolescent

- students, *Cogent Psychology*, 9(1) doi: 10.1080/23311908.2022.2123586
- Olivier, E., Archambault, I., De Clercq, M., & Galand, B. (2019). Student self-efficacy, classroom engagement, and academic achievement: Comparing three theoretical frameworks. *Journal of Youth and Adolescence*, 48(2), 326–340. <https://doi.org/10.1007/s10964-018-0952-0>
- Ong, S. K. (2018). A case study on exploring the motivation and engagement of the less academically inclined students in a Specialised School in Singapore.
- Orcan, F. (2020). Parametric or Non-parametric: Skewness to test normality for mean comparison. *International Journal of Assessment Tools in Education*, 7(2), 236–246. <https://doi.org/10.21449/ijate.656077>
- Osman, Z. (2018). Influence of self-efficacy as a mediator on time management and students' performance relationship in Malaysian online distance learning institutions. *International Journal of Business and Management*, 2(3), 9–15. <https://doi.org/10.26666/rmp.ijbm.2018.3.2>
- Peng, C. (2021). The academic motivation and engagement of students in English as a foreign language class: Does Teacher Praise Matter? *Frontiers in Psychology*, 12(October). <https://doi.org/10.3389/fpsyg.2021.778174>
- Pierre, U., France, M., & Harackiewicz, J. M. (2007). *Avoidance Goals : When Uncertainty Makes a Difference*. <https://doi.org/10.1177/0146167207301022>
- Poortvliet, M. (2020). Encyclopedia of personality and individual differences. *Encyclopedia of Personality and Individual Differences*, January 2016. <https://doi.org/10.1007/978-3-319-28099-8>

- Qiu, Y., & Ye, P. (2023). The influence of family socio-economic status on learning engagement of college students majoring in preschool education : The mediating role of parental autonomy support and the moderating effect of psychological capital. January. <https://doi.org/10.3389/fpsyg.2022.1081608>
- Qudsyi, H., Husnita, I., Mulya, R., Jani, A. A., & Arifani, A. D. (2020). Student engagement among high school students: roles of parental involvement, peer attachment, teacher support, and academic self-efficacy. (397) 241–251. <https://doi.org/10.2991/assehr.k.200129.032>
- Reeve, J., Kim, I. S., & Reeve, J. M. (2018). A Self-determination Theory. 19 (January), 1–19. <https://doi.org/10.1007/978-1-4614-2018-7>
- Reeve, J. (2013). How students create motivationally support ive learning environments for themselves: The concept of agentic engagement. *Journal of Educational Psychology, 105*(3), 579–595. <https://doi.org/10.1037/a0032690>
- Reeve, J., & Tseng, C. (2011). Agency as a fourth aspect of students ’ engagement during learning activities. *Contemporary educational educational psychology*. <https://doi.org/10.1016/j.cedpsych.2011.05.002>
- Robinson, K. A., Perez, T., White-Levatich, A., & Linnenbrink-Garcia, L. (2022). Gender differences and roles of two science self-efficacy beliefs in predicting post-college outcomes. *Journal of Experimental Education, 90*(2). <https://doi.org/10.1080/00220973.2020.1808944>
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology, 61*.

<https://doi.org/10.1016/j.cedpsych.2020.101860>

Sa'diyah, S. K., & Qudsyi, H. (2016). Peer support and student engagement among high-school students in Indonesia. *International Conference on Education, Psychology, and Social Sciences (ICEPS 2016)*, June, 309–321. <http://doi.apa.org/getdoi.cfm?doi=10.1037/0022-0663.99.1.83>

Şahin, E., & Kürkçü, R. (2016). Sex and age differences in achievement goal orientations in Turkish Adolescents. *Journal of Education and Practice* 7(27), 149–156. www.iiste.org

Salmela-Aro, K., Tang, X., Symonds, J., & Upadyaya, K. (2021). Student engagement in adolescence: A scoping review of longitudinal studies 2010–2020. *Journal of Research on Adolescence*, 31(2), 256–272. <https://doi.org/10.1111/jora.12619>

Senko, C. (2016). Achievement goals theory: A story of early promises, eventual discords, and future possibilities. *Handbook of motivation at school: Second Edition, January 2016*, 75–95. <https://doi.org/10.4324/9781315773384>

Sekreter, G. (2016). Mastery goal orientation promoting students' expectancies for success and self-efficacy. *Journal of Education in Black Sea Region*, 2(1). <https://doi.org/10.31578/jeps.v2i1.33>

Şengönül, T. (2022). A Review of the Relationship between Parental Involvement and Children ' s Academic Achievement and the Role of Family Socioeconomic Status in this Relationship. *12(2)*. <https://doi.org/10.47750/pegegog.12.02.04>

- Schaufeli, W. B., Salanova, M., Bakker, A. B., & Ales-rom, V. G. (2002). The measurement of engagement and burnout: A two sample confirmatory factor. *Journal of Human Studies*. 71–92.
- Schaufeli, W. B. (2013). What is engagement? *Journal of Employee engagement in theory and practice*, 15–35.
<https://doi.org/10.4324/9780203076965>
- Schindler, L. A., Burkholder, G. J., Morad, O. A., & Marsh, C. (2017). Computer-based technology and student engagement: a critical review of the literature. *International Journal of Educational Technology in Higher Education*, 14(1). <https://doi.org/10.1186/s41239-017-0063-0>
- Scotland, J. (2012). Exploring the philosophical underpinnings of research : relating ontology and epistemology to the methodology and methods of the scientific , interpretive , and critical research paradigms. 5(9), 9–16.
<https://doi.org/10.5539/elt.v5n9p9>
- Simamora, B., & Mutiarawati, E. V. (2021). Achievement goals model validation: Is the 2x2 better than the trichotomous? *International Journal of Evaluation and Research in Education*, 10(1), 142–149.
<https://doi.org/10.11591/ijere.v10i1.20869>
- Singh, J. A., Ph, D., Sc, M. H., Siddiqi, M., Hc, M. P., Parameshwar, P., Chandra-mouli, V., & Sc, M. (2019). World Health Organization guidance on ethical considerations in planning and reviewing research studies on sexual and reproductive health in adolescents. *Journal of Adolescent Health*, 64(4), 427–429.
<https://doi.org/10.1016/j.jadohealth.2019.01.008>

- Sheikh, M., Bay, N., Ghorbani, S., & Esfahaninia, A. (2022). Effects of social support and physical self-efficacy on physical activity of adolescents. *International Journal of Pediatrics*, *10*(100), 15823–15834.
<https://doi.org/10.22038/IJP.2022.62762.4793>
- Shi, H. (2021). Examining College-Level ELLs' self-efficacy beliefs and goal orientation. *I3*(2), 65–82. <https://doi.org/10.32674/jcihe.v13i2.2949>
- Smith, J., Nadeau, M. F., Archambault, I., Guimond, F. A., St-Amand, J., Fitzpatrick, C., & Gagnon, M. (2022). Linking high school students' achievement goal orientations with their competence beliefs and their perception of teachers' emotional support during the COVID-19 Pandemic. *Frontiers in Education*, *7*(March), 1–7.
<https://doi.org/10.3389/feduc.2022.762766>
- Sökmen, Y. (2021). The role of self-efficacy in the relationship between the learning environment and student engagement. *Educational Studies*, *47*(1), 19–37. <https://doi.org/10.1080/03055698.2019.1665986>
- State, O. (2019). *Family Functioning and Adolescents' Academic Engagement in Secondary Family Functioning and Adolescents' Academic Engagement in Secondary Schools in Ogun State, Nigeria Abstract*. June.
- Subaşı, M. (2020). Modeling the relationships among mastery goal orientations, positive coping strategy, and motivational beliefs in science. *Science Education International*, *31*(4), 328–333.
<https://doi.org/10.33828/sei.v31.i4.1>
- Suhag, A. K., Khan, R., Hameed, H., & Jagerani, S. A. (2019). Coping strategies among secondary school students against stress and anxiety-a

phenomenological study. *IO*(1).

Suprayogi, M. N., Ratriana, L., & Wulandari, A. P. J. (2019). The interplay of academic efficacy and goal orientation toward academic achievement. *Journal of Physics: Conference Series*, 1175(1), 4–10. <https://doi.org/10.1088/1742-6596/1175/1/012132>

Soyer, M. K., & Kirikkanat, B. (2019). Undergraduates' achievement goal orientations, academic self-efficacy and hope as the predictors of their learning approaches. *European Journal of Educational Research*, 8(1) <https://doi.org/10.12973/eu-jer.8.1.99>

Tan, C. Y., Gao, L., Hong, X., & Song, Q. (2023). Socioeconomic status and students' science self-efficacy. *British Educational Research Journal*, July 2022, 1–51. <https://doi.org/10.1002/berj.3869>

Tsaousis, I. (2022). Examining academic performance across gender differently : Measurement invariance and latent mean differences using bias-corrected bootstrap confidence intervals. *August*, 1–12. <https://doi.org/10.3389/fpsyg.2022.896638>

UBOS. (2018). Uganda Bureau of Statistics. The 2018 Statistical Abstract. 315. https://www.ubos.org/wp-content/uploads/publications/05_2019STATISTICAL_ABSTRACT_2018.pdf

Üztemur, S. (2020). Achievement goals and learning approaches in the context of social studies teaching: Comparative analysis of 3x2 and 2x2 models. *Participatory Educational Research*, 7(2), 1–18. <https://doi.org/10.17275/per.20.16.7.2>

- Veiga, H. (2016). Students' engagement in school and family variables: A literature review. *Student Engagement in School and Variables*. 399-412.
- Viorel Mih et al. (2015). Achievement goals and behavioural and emotional engagement as precursors of academic adjusting. *Procedia - Social and Behavioural Sciences*. <https://doi.org/doi:10.1016/j.sbspro.2015.11.243>
- Wang, H., Xu, M., Xie, X., Dong, Y., & Wang, W. (2021). Relationships between achievement goal orientations, learning engagement, and academic adjustment in Freshmen: Variable-Centered and Person-Centered Approaches. *Frontiers in Psychology*, 12(November). <https://doi.org/10.3389/fpsyg.2021.767886>
- Wang, X., Zhen, X., & Shao, M. (2023). Academic achievement is more closely associated with student-peer relationships than with student-parent relationships or student-teacher relationships. *February*. <https://doi.org/10.3389/fpsyg.2023.1012701>
- Wara, E., Aloka, P. J. O., & Odongo, B. C. (2018). Relationship between emotional engagement and academic achievement among Kenyan secondary school students. *Academic Journal of Interdisciplinary Studies*, 7(1). <https://doi.org/10.2478/ajis-2018-0011>
- Wara, E., Aloka, P. J., & Odongo, B. C. (2018b). Relationship between cognitive engagement and academic achievement among Kenyan Secondary School Students. *Mediterranean Journal of Social Sciences*, 9(2). <https://doi.org/10.2478/mjss-2018-0026>
- Wigfield, A., Eccles, J. S., Fredricks, J. A., Simpkins, S., Roeser, R. W., & Schiefele, U. (2015). Development of achievement motivation and engagement. In *Handbook of Child Psychology and Developmental*

Science (Issue March).

<https://doi.org/10.1002/9781118963418.childpsy316>

- Wilcox, G., Mcquay, J., Blackstaffe, A., Perry, R., & Hawe, P. (2019). Supporting academic engagement in boys and girls running head: University of Calgary. *April*. <https://doi.org/10.1177/0829573517703239>
- World Bank. (2018). *World Development Report 2018: Learning to Realize Education's Promise*. Washington, DC: World Bank. doi:10.1596/978-1-4648-1096-1
- Wolverton, C. C., Guidry Hollier, B. N., & Lanier, P. A. (2020). The impact of computer self-efficacy on student engagement and group satisfaction in online business courses. *Electronic Journal of E-Learning*, 18(2), 175–188. <https://doi.org/10.34190/EJEL.20.18.2.006>
- Yang, L., Sin, K. F., & Lui, M. A. (2020). The effects of school support on school engagement with self-determination as a mediator in students with special needs. *January*. <https://doi.org/10.1080/1034912X.2020.1719046>
- Yeh, Y., Kwok, O., Chien, H., & Sweany, N. W. (2019). How college students' achievement goal orientations predict their expected online learning outcome: The mediation roles of self-regulated learning strategies and supportive online learning behaviours. *Online Learning Journal (OLJ)*, 23(4), 23–41. <https://doi.org/10.24059/olj.v23i4.2076>
- Yu, J. (2021). Which boys and which girls are falling behind? linking adolescents' gender role profiles to motivation, engagement, and achievement. *Journal of Youth and Adolescence*, 50(July). <https://doi.org/10.1007/s10964-020-01293-z>

- Yu, Z., & Deng, X. (2022). A Meta-Analysis of gender differences in e-learners' self-efficacy, satisfaction, motivation, attitude, and performance across the world. *Frontiers in Psychology, 13*(May).
<https://doi.org/10.3389/fpsyg.2022.897327>
- Zambrano, J., Kennedy, A. A. U., Aguilera, C., Yates, N., & Patall, E. A. (2022). Students' beliefs about agentic engagement: A phenomenological study in urban high school physical science and engineering classes. *Journal of Educational Psychology, 114*(5),
<https://doi.org/10.1037/edu0000690>
- Zhao, Y., Zheng, Z., Pan, C., & Zhou, L. (2021). Self-Esteem and academic engagement among adolescents: a moderated mediation model. *Frontiers in Psychology, 12*(June). <https://doi.org/10.3389/fpsyg.2021.690828>
- Zimmerman, W. A. (2017). Predicting success in an online course using expectancies, values, and typical mode of instruction. *International Journal of E-Learning & Distance Education, 32*(1). 1-20.

APPENDICES

ADDITIONAL ANALYSIS RESULTS

Appendix A.1: Self-Efficacy Sub-constructs as Mediators of the Relationship between Mastery Achievement Goal Orientation and Academic Engagement Sub-constructs

This section presents 48 models resulting from regression analysis results regarding the mediation effect of each of the three self-efficacy sub-constructs (social, emotional and academic) on the relationship between each of the four achievement goal orientation dimensions (mastery approach, performance approach, mastery avoidance and performance avoidance) and each of the four academic engagement constructs (behavioural, emotional, cognitive and agentic). Each of the three self-efficacy sub constructs resulted in 12 models such as the mediation effect of self-efficacy on the relationship between mastery approach achievement goal orientation and academic engagement resulted as follows;

MAP → SSE → BE; MAP → SSE → EE;
MAP → SSE → CE; MAP → SSE → AE;
MAP → ESE → BE; MAP → ESE → EE;
MAP → ESE → CE; MAP → ESE → AE;
MAP → ASE → BE; MAP → ASE → EE;
MAP → ASE → CE; MAP → ASE → AE.

Table A.1.1: *Mediation Effect of Social Self-efficacy (SSE) on the Relationship between Mastery Approach Goal Orientation and Behavioural Engagement*

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SSE	MAP	0.21	6.80	<.01	0.29	0.08	46.23	0.05	0.15	0.27
2	BE	MAP	0.21	6.08	<.01	0.44	0.20	61.39	0.03	0.14	0.27
		SSE	0.33	7.11	<.01						
3	BE	MAP	0.27	8.11	<.01	0.34	0.11	65.81	0.34	0.21	0.34
4	a*b		0.10							0.04	0.10

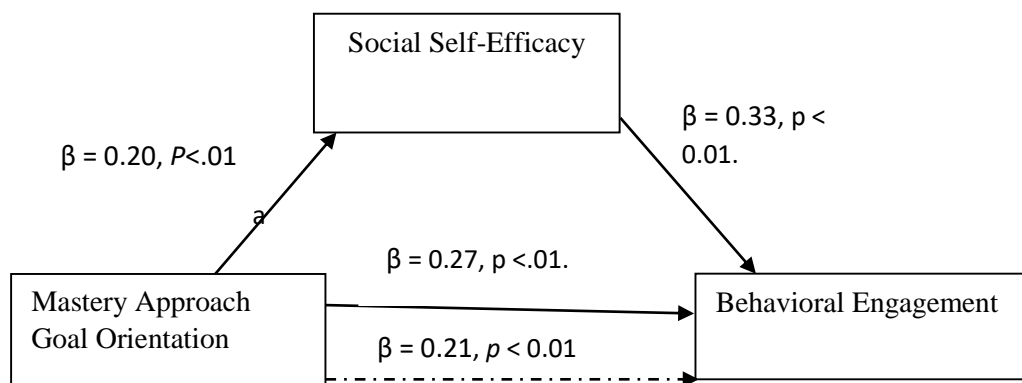


Figure A. 1.1: *The Mediation Model of Social Self-Efficacy as a Predictor of Behavioural Engagement*

Results in Table A.1.1 and Figure A.1.1 explain the mediation effect of social self-efficacy on the relationship between mastery approach achievement goal orientation and behavioural engagement. Model 1 was meant to determine the regression effect of social self-efficacy on the relationship between mastery goal orientation and behavioural engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. Path a, of regressing social self-efficacy on Mastery approach goals (MAP) was statistically significant (path a), $\beta = 0.207, t = 6.799, P < .01$ with $R^2 = 0.083$, which implies that MAP explained 8.3% variance in social self-efficacy.

The regression coefficient indicated that every unit increase in MAP, results in 0.207 increase in social self-efficacy ($t = 6.799, p < .01$). Model 2 shows the results of the regression of behavioural engagement predicted by both achievement goal orientation and social self-efficacy. Mastery goal orientation significantly predicts behavioural engagement in the model (Paths c'), $\beta = 0.205, t = 6.08, P < .01$ and self-efficacy predicts behavioural engagement (path b), $\beta = 0.33, t = 7.11, p < .01$ with $R^2 = 0.19$. The R^2 value indicates that the model explains 20.0% of the variance in behavioural engagement. Results indicate that every unit increase in MAP results in a 0.201 unit increase in behavioural engagement, every unit increase in social self-efficacy results in 0.33-unit increase in behavioural engagement.

Model 3 was conducted to determine the effect of mastery approach goal orientation on behavioural engagement when social self-efficacy is not included in the model. When social self-efficacy is not in the model, achievement goal orientation significantly predicts behavioural engagement, (path c), $\beta = 0.27, t = 8.11, p < .01$. The R^2 value indicates that achievement goal orientation explains 11.0% of the variance in behavioural engagement. The beta coefficients for MAP in paths c and c' are different, with the latter value being lower. This implies social self-efficacy has a significant partial effect on the relationship between mastery approach achievement goal orientation and behavioural engagement. The increase in explanation of variance in the behavioural engagement changed from 11.0% to 20.0%.

The indirect effect ($a*b$) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.04, 0.10). Therefore, social self-efficacy partially mediates mastery achievement goal orientation and

behavioural engagement. This implies that whereas social self-efficacy increases mastery achievement goal orientation's ability to impact behavioural engagement, there other factors which play a role in the relationship. Nevertheless, social self-efficacy is a potential mediator between mastery approach achievement goal orientation and behavioural engagement.

Table A.1.2 *Mediation Effect of Social Self-efficacy on the Relationship between Mastery Approach Goals and Emotional Engagement*

Model	DV	IV/MV	β	t	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SSE	MAP	0.21	6.80	<.01	0.29	0.08	46.23	0.03	0.15	0.27
2	EE	MAP	0.16	4.76	<.01	0.41	0.17	51.15	0.03	0.09	0.24
		SSE	0.34	7.17	<.01				0.05	0.24	0.43
3	EE	MAP	0.23	6.80	<.01	0.30	0.08	46.30	0.03	0.16	0.30
4	a*b		0.07							0.05	0.13

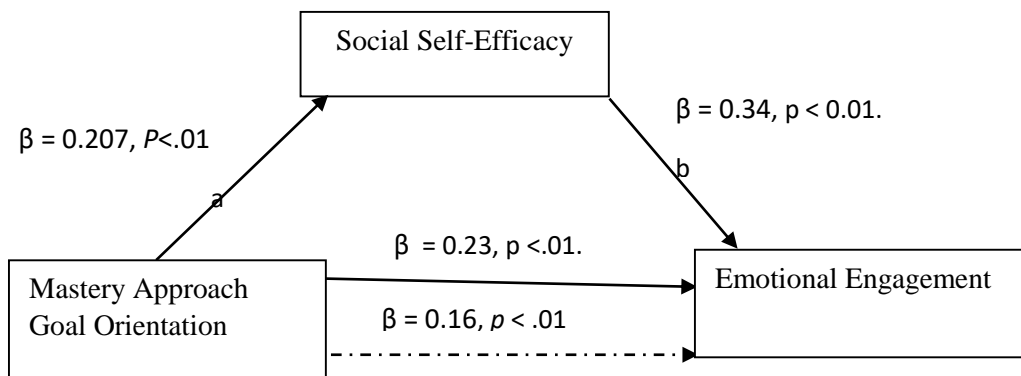


Figure A.1.2: *The Mediation Effect of Social Self-efficacy on the Relationship between Mastery Approach Goal Orientation and Emotional Engagement*

The study results in Table A.1.2 and Figure A1.2 show the mediation effect of social self-efficacy on the relationship between mastery approach goal orientation and emotional engagement. Model 1 was conducted to determine the regression effect of social self-efficacy on the relationship between mastery goal orientation and emotional engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. Path a of regressing

social self-efficacy on MAP was statistically significant (path a), $\beta = 0.207$, $t = 6.799$, $P < .01$ with $R^2 = 0.083$, which implies that MAP explained 8.3% variance in social self-efficacy. The regression coefficient indicated that every unit increase in MAP, results in 0.207 increase in social self-efficacy ($t = 6.799$, $p < .01$).

Model 2 shows the results of the regression of emotional engagement predicted by both mastery goal orientation and social self-efficacy. Mastery achievement goal orientation significantly predict emotional engagement in the model (Paths c'), $\beta = 0.16$, $t = 4.76$, $P < .01$ and self-efficacy predicts emotional engagement (path b), $\beta = 0.34$, $t = 7.17$, $p < .01$ with $R^2 = 0.17$. The R^2 value indicates that the model explains 17.0% of the variance in emotional engagement.

Model 3 was conducted to determine the effect of mastery goal orientation on emotional engagement when social self-efficacy is not included in the model. When social self-efficacy is not in the model, achievement goal orientation significantly predicts emotional engagement, (path c), $\beta = 0.23$, $t = 6.80$, $p < .01$. The R^2 value indicates that achievement goal orientation explains 8.3% of the variance in emotional engagement. The beta coefficients for MAP in paths c and c' are different, with the latter value being lower.

This implies that when social self-efficacy is added in the model, the effect of mastery achievement goal orientation on emotional engagement increases with increased explanation of variance in the emotional engagement from 8.30% to 17.0%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI

(0.05, 0.13). Therefore, social self-efficacy partially mediates achievement goal orientation and emotional engagement.

Table A.1.3: *Mediation Effect of Social Self-efficacy (SSE) on the Relationship between Mastery Approach Goals (MAP) and Cognitive Engagement (CE)*

Model	DV	IV/MV	β	t	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SSE	MAP	0.21	6.80	< .01	0.29	0.08	46.23	0.03	0.15	0.27
2	CE	MAP	0.19	4.51	< .01	0.38	0.15	43.22	0.04	0.10	0.27
		SSE	0.37	6.50	< .01				0.06	0.26	0.48
3	CE	MAP	0.26	6.41	< .01	0.27	0.08	41.21	0.04	0.18	0.34
4	a*b		0.08							0.05	0.11

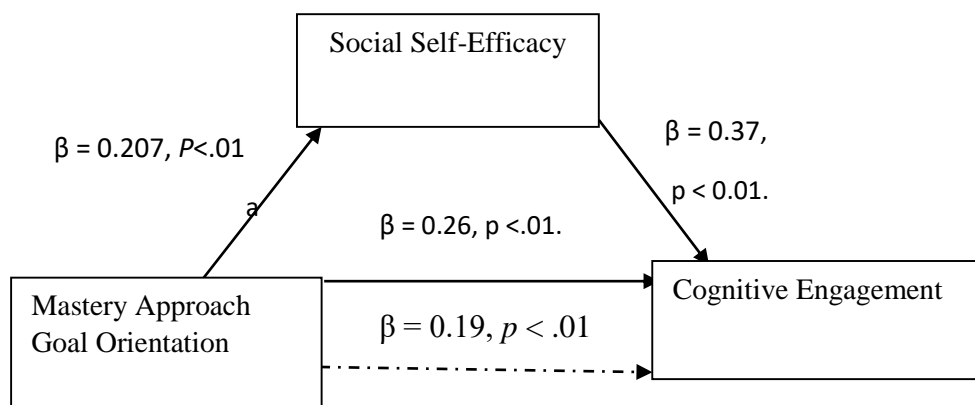


Figure A.1.3: *The Mediation Effect of Social Self-Efficacy on the Relationship between Mastery Goal Orientation and Cognitive Engagement*

The study results in Table A1.3 and Figure A1.3 shows the mediation effect of social self-efficacy on the relationship between mastery approach goal orientation and cognitive engagement. Model 1 was meant to determine the regression effect of social self-efficacy on the relationship between mastery goal orientation and cognitive engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. Path a of regressing social

self-efficacy on MAP was statistically significant (path a), $\beta = 0.207$, $t = 6.799$, $P < .01$ with $R^2 = 0.083$, which implies that MAP explained 8.3% variance in social self-efficacy. The regression coefficient indicated that every unit increase in MAP, results in 0.207 increase in social self-efficacy ($t = 6.799$, $p < .01$).

Model 2 shows the results of the regression of cognitive engagement predicted by both mastery goal orientation and social self-efficacy. Mastery goal orientation significantly predict cognitive engagement in the model (Paths c'), $\beta = 0.19$, $t = 4.76$, $P < .01$ and self-efficacy predicts cognitive engagement (path b), $\beta = 0.37$, $t = 7.17$, $p < .01$ with $R^2 = 0.17$. The R^2 value indicates that the model explains 17.0 % of the variance in cognitive engagement. Results of this study suggest that a unit increase in MAP results in a 0.19 increase in cognitive engagement while a unit increase in social self-efficacy results in a 0.37 in cognitive engagement.

Model 3 was meant to determine the effect of mastery goal orientation on cognitive engagement when social self-efficacy is not included in the model. When social self-efficacy is not in the model, mastery approach achievement goal orientation significantly predicts cognitive engagement, (path c), $\beta = 0.26$, $t = 6.80$, $p < .01$. The R^2 value indicates that achievement goal orientation explains 8.3% of the variance in cognitive engagement. The beta coefficients for MAP in paths c and c' are different, with the latter value being lower. This implies that when social self-efficacy is added in the model, the effect of mastery achievement goal orientation on cognitive engagement increases with increased explanation of variance in the emotional engagement from 8.30% to 17.0%. The indirect effect (a*b) is significant because the bootstrap confidence

interval does not contain a zero BootLLCI, BootULCI (0.05, 0.11). Therefore, social self-efficacy mediates MAP goal orientation and cognitive engagement.

Table A.1.4: *The Mediation Effect of Social Self-Efficacy (SSE) on the Relationship between Mastery Approach Goal Orientation (MAP) and Agentic Engagement (AGE)*

Model	DV	IV/MV	β	t	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SSE	MAP	0.21	6.80	<.01	0.38	0.08	46.23	0.03	0.15	0.27
2	AGE	MAP	0.18	4.23	<.01	0.38	0.14	42.57	0.04	0.10	0.26
		SSE	0.39	6.63	<.01				0.06	0.28	0.50
3	AGE	MAP	0.26	6.41	<.01	0.26	0.07	38.00	0.04	0.18	0.34
4	a*b		0.08							0.05	0.12

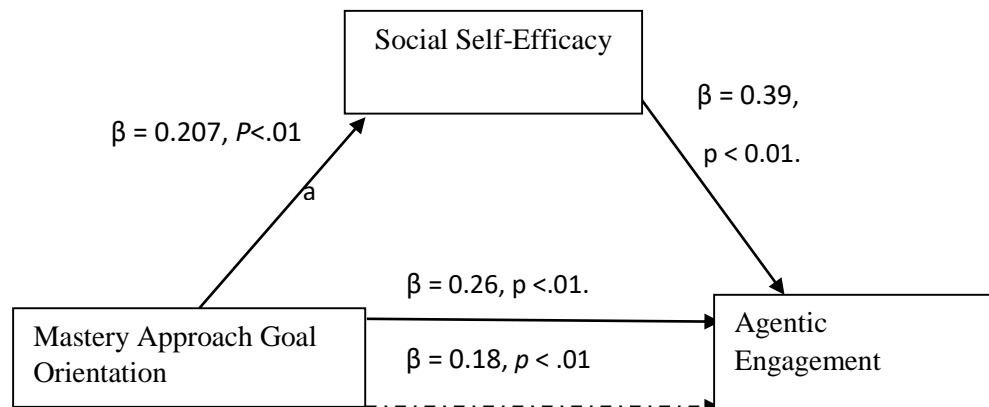


Figure A.1.4: *The Mediation Effect of Social Self-Efficacy on the Relationship between Mastery Approach Goal Orientation and Agentic Engagement*

The study results in Table A1.4 Figure A1.4 present the mediation effect of social self-efficacy on the relationship between mastery approach goal orientation and agentic engagement Model 1 was meant to determine the regression effect of social self-efficacy on the relationship between mastery approach goal orientation and agentic engagement among adolescent students

in secondary schools in Kabale district, Southwestern Uganda. Path a of regressing social self-efficacy on MAP was statistically significant (path a), $\beta = 0.207$, $t = 6.799$, $P < .01$ with $R^2 = 0.083$, which implies that MAP explained 8.3% variance in social self-efficacy. The regression coefficient indicated that every unit increase in MAP, results in 0.207 increase in social self-efficacy ($t = 6.799$, $p < .01$).

Model 2 shows the results of the regression of behavioural engagement predicted by both mastery goal orientation and social self-efficacy. Mastery goal orientation significantly predict agentic engagement in the model (Paths c'), $\beta = 0.18$, $t = 4.23$, $P < .01$ and self-efficacy predicts agentic engagement (path b), $\beta = 0.39$, $t = 6.62$, $p < .01$ with $R^2 = 0.14$. The R^2 value indicates that the model explains 14.0 % of the variance in agentic engagement.

Model 3 was conducted to determine the effect of mastery approach goal orientation on agentic engagement when social self-efficacy is not included in the model. When social self-efficacy is not in the model, achievement goal orientation significantly predicts agentic engagement, (path c), $\beta = 0.26$, $t = 6.17$, $p < 0.01$. The R^2 value indicates that achievement goal orientation explains 7.0% of the variance in agentic engagement. The beta coefficients for MAP in paths c and c' are different, with the latter value being lower. This implies that when social self-efficacy is added in the model, the effect of mastery approach goal orientation on agentic engagement increases with increased explanation of variance in the agentic engagement from 7.0% to 14.0%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.05, 0.12). Therefore, social self-efficacy mediates achievement goal orientation and agentic engagement.

Table A.1.5: *The Mediation Effect of Emotional Self efficacy (ESE) on the Relationship between Mastery Approach Goal Orientation (MAP) and Behavioural Engagement (BE)*

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ESE	MAP	0.20	5.40	< .01	0.23	.054	46.23	0.04	0.12	0.27
2	BE	MAP	0.24	7.08	< .01	0.38	0.14	42.00	0.03	0.18	0.31
		ESE	0.16	4.03	< .001				0.06	0.08	0.24
3	BE	MAP	0.27	8.11	< .01	0.34	.115	65.80	0.03	0.21	0.34
4	a*b		0.03							0.02	0.05

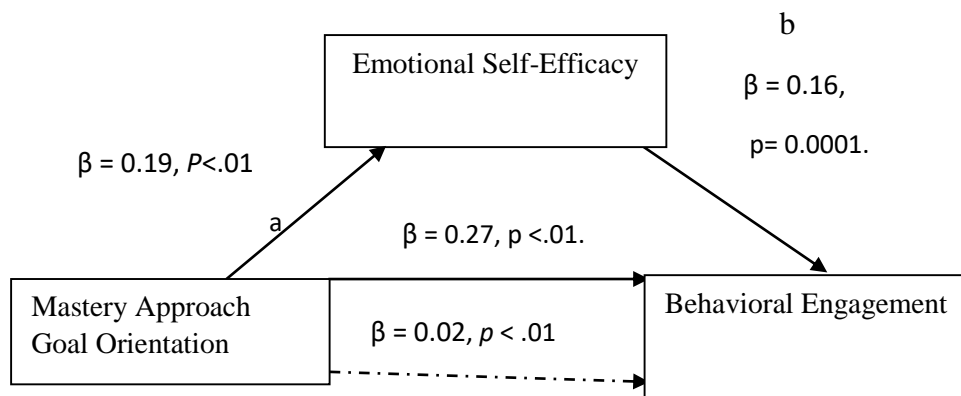


Figure A.1.5: *The Mediation Effect of Emotional Self-Efficacy on the Relationship between Mastery Approach Goal Orientation and Behavioural Engagement*

The study results in Table A1.5 and Figure A1.5 shows the mediation effect of emotional self-efficacy on the relationship between mastery approach goal orientation and behavioural engagement Model 1 was conducted to determine the regression effect of emotional self-efficacy on the relationship between mastery approach goal orientation and behavioural engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. Path a of regressing emotional self-efficacy on MAP was statistically

significant (path a), $\beta = 0.195$, $t = 5.36$ $P < .01$ with $R^2 = 0.053$, which implies that MAP explained 5.3% variance in emotional self-efficacy. The regression coefficient indicated that every unit increase in MAP, results in 0.195 increase in social self-efficacy ($t = 5.36$, $p < .01$).

Model 2 shows the results of the regression of behavioural engagement predicted by both mastery approach goal orientation and emotional self-efficacy. Mastery approach goal orientation significantly predict behavioural engagement in the model (Paths c'), $\beta = 0.24$, $t = 7.08$, $P < .01$ and emotional self-efficacy predicts behavioural engagement (path b), $\beta = 0.16$, $t = 4.03$, $p = .0001$ with $R^2 = 0.142$. The R^2 value indicates that the model explains 14.2 % of the variance in behavioural engagement.

Model 3 was conducted to determine the effect of mastery approach goal orientation on behavioural engagement when emotional self-efficacy is not included in the model. When emotional self-efficacy is not in the model, mastery goal orientation significantly predicted behavioural engagement, (path c), $\beta = 0.27$, $t = 8.11$, $P < .01$. The R^2 value indicates that achievement goal orientation explains 11.5% of the variance in behavioural engagement. The beta coefficients for MAP in paths c and c' are different, with the latter value being lower. This implies that when emotional self-efficacy is added in the model, the effect of mastery approach goal orientation on agentic engagement increases with increased explanation of variance in the behavioural engagement from 11.5% to 14.2%. The indirect effect ($a*b$) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.02, 0.05). Therefore, emotional self-efficacy mediates achievement goal orientation and behavioural engagement.

Table A.1.6: *The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Mastery Approach Goal Orientation (MAP) and Emotional Engagement (EE)*

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ESE	MAP	0.20	5.40	< .01	0.23	.054	46.23	0.04	0.12	0.27
2	EE	MAP	0.19	5.60	< .01	0.36	0.13	37.8	0.03	0.12	0.26
		ESE	0.16	5.20	< .01		0.04		0.13	0.29	
3	EE	MAP	0.23	6.8	< .01	0.29	.084	46.29	0.03	0.16	0.30
4	a*b		0.04							0.03	0.08

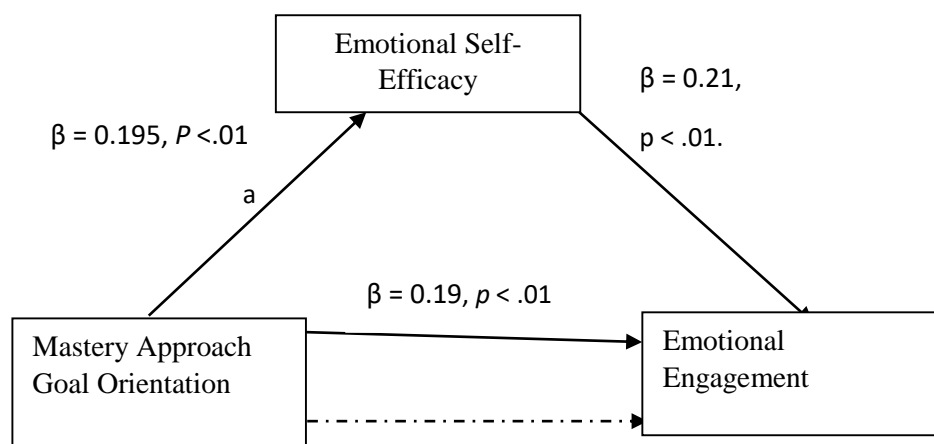


Figure A.1.6: *The Mediation Effect of Emotional Self-Efficacy on the Relationship between Mastery Approach Goals and Emotional Engagement*

The study results in Table A.1.6 and Figure A.1.6 show the mediation effect of emotional self-efficacy on the relationship between mastery approach goal orientation and emotional engagement. Model 1 was conducted to determine the regression effect of emotional self-efficacy on the relationship between mastery approach goal orientation and emotional engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. Path a of regressing emotional self-efficacy on MAP was statistically significant (path a), $\beta = 0.195$, $t = 5.36$, $P < .01$ with $R^2 = 0.053$, which implies that MAP explained 5.3% variance in emotional self-efficacy. The regression coefficient

indicated that every unit increase in MAP, results in 0.195 increase in social self-efficacy ($t = 5.36, p < .01$).

Model 2 shows results of the regression of emotional engagement predicted by both mastery approach goal orientation and emotional self-efficacy. Mastery approach goal orientation significantly predict emotional engagement in the model (Paths c'), $\beta = 0.19, t = 5.58, P < .01$ and emotional self-efficacy predicts emotional engagement (path b), $\beta = 0.21, t = 5.20, p < .01$ with $R^2 = 0.129$. The R^2 value indicates that the model explains 12.9% of the variance in emotional engagement.

Model 3 was conducted to determine the effect of mastery approach goal orientation on emotional engagement when emotional self-efficacy is not included in the model. When emotional self-efficacy is not in the model, mastery approach goal orientation significantly predicts emotional engagement, (path c), $\beta = 0.23, t = 6.80, p < .01$. The R^2 value indicates that mastery approach goal orientation explains 8.30% of the variance in emotional engagement. The beta coefficients for MAP in paths c and c' are different, with the latter value being lower. This implies that when emotional self-efficacy is added in the model, the effect of mastery approach goal orientation on behavioural engagement increases with increased explanation of variance in the behavioural engagement from 8.30% to 12.9%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.03, 0.08). Therefore, emotional self-efficacy mediates mastery approach goal orientation and emotional engagement.

Table A.1.7: *The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Mastery Approach Goal Orientation (MAP) and Cognitive Engagement (CE)*

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ESE	MAP	0.20	5.40	<.01	0.23	.054	46.23	0.04	0.12	0.27
2	CE	MAP	0.20	5.00	<.01	0.39	0.16	46.50	0.03	0.12	0.28
		ESE	0.33	5.20	<.01						
3	CE	MAP	0.26	6.42	<.01	0.27	.080	46.29	0.05	0.18	0.34
4	a*b		0.06							0.04	0.10

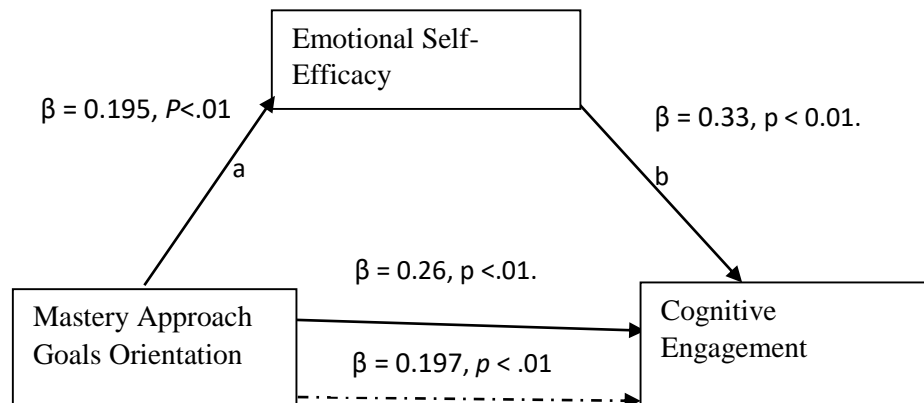


Figure A.1.7: *The Mediation Effect of Emotional Self-Efficacy on the Relationship Mastery Approach Goal Orientation and Cognitive Engagement*

The study results in Table A.1.7 and Figure A.1.7 above shows the mediation effect of emotional self-efficacy on the relationship between mastery approach goal orientation and cognitive engagement. Model 1 was meant to determine the regression effect of emotional self-efficacy on the relationship between mastery approach goal orientation and cognitive engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. Path a of regressing emotional self-efficacy on MAP was statistically significant (path a), $\beta = 0.195, t = 5.36, P < .01$ with $R^2 = 0.053$, which implies that MAP

explained 5.3% variance in emotional self-efficacy. The regression coefficient indicated that every unit increase in MAP, results in 0.195 increase in social self-efficacy ($t = 5.36, p < .01$). Model 2 shows results of the regression of cognitive engagement predicted by both mastery approach goal orientation and emotional self-efficacy. Mastery approach goal orientation significantly predict cognitive engagement in the model (Paths c'), $\beta = 0.197, t = 4.92, P < .01$ and emotional self-efficacy predicts cognitive engagement (path b), $\beta = 0.33, t = 6.92, p < .01$ with $R^2 = 0.155$. The R^2 value indicates that the model explains 15.5% of the variance in cognitive engagement.

Model 3 was conducted to determine the effect of mastery approach goal orientation on cognitive engagement when emotional self-efficacy is not included in the model. When emotional self-efficacy is not in the model, mastery approach goal orientation significantly predicts cognitive engagement, (path c), $\beta = 0.26, t = 6.42, p < .01$. The R^2 value indicates that mastery approach goal orientation explains 7.50% of the variance in cognitive engagement. The beta coefficients for MAP in paths c and c' are different, with the latter value being lower. This implies that when emotional self-efficacy is added in the model, the effect of mastery approach goal orientation on cognitive engagement increases with increased explanation of variance in the cognitive engagement from 7.50% to 15.5%.

The indirect effect ($a*b$) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.037, 0.10). Therefore, emotional self-efficacy mediates mastery approach goal orientation and cognitive engagement.

Table A.1.8: *The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Mastery Approach Goal Orientation (MAP) and Agentic Engagement (AGE)*

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ESE	MAP	0.20	5.40	<.01	0.23	.054	28.73	0.04	0.12	0.27
2	AGE	MAP	0.21	5.01	<.01	0.34	0.12	33.20	0.04	0.13	0.30
		ESE	0.26	5.14	<.01				0.05	0.16	0.36
3	AGE	MAP	0.26	6.17	<.01	0.26	.070	38.00	0.04	0.18	0.34
4	a*b		0.05							0.03	0.08

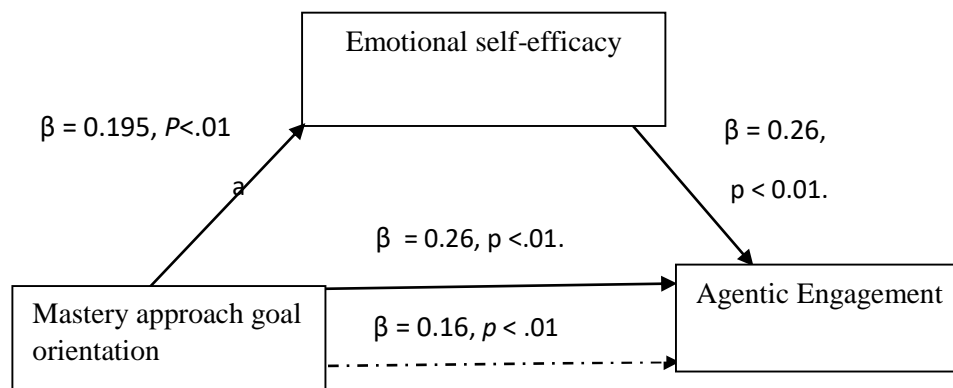


Figure A.1.8: *The Mediation Effect of Emotional Self-Efficacy on the Relationship Mastery Approach Goal and Agentic Engagement*

The study results in Table A.1.8 and Figure A.1.8 shows the mediation effect of emotional self-efficacy on the relationship between mastery approach goal orientation and agentic engagement. Model 1 was meant to determine the regression effect of emotional self-efficacy on the relationship between mastery approach goal orientation and agentic engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. Path a of regressing emotional self-efficacy on MAP was statistically significant (path a), $\beta = 0.195$, $t = 5.36$, $P < .01$ with $R^2 = 0.053$, which implies that MAP explained

5.3% variance in emotional self-efficacy. The regression coefficient indicated that every unit increase in MAP, results in 0.195 increase in emotional self-efficacy ($t = 5.36, p < .01$).

Model 2 shows the results of the regression of agentic engagement predicted by both mastery approach goal orientation and emotional self-efficacy. Mastery approach goal orientation significantly predict agentic engagement in the model (Paths c'), $\beta = 0.21, t = 4.95, P < .01$ and emotional self-efficacy predicts agentic engagement (path b), $\beta = 0.26, t = 5.14, p < .01$ with $R^2 = 0.120$. The R^2 value indicates that the model explains 12.0% of the variance in agentic engagement.

Model 3 was meant to determine the effect of mastery approach goal orientation on agentic engagement when emotional self-efficacy is not included in the model. When emotional self-efficacy is not in the model, mastery approach goal orientation significantly predicts agentic engagement, (path c), $\beta = 0.26, t = 6.42, p < .01$. The R^2 value indicates that mastery approach goal orientation explains 6.90% of the variance in agentic engagement. The beta coefficients for MAP in paths c and c' are different, with the latter value being lower. This implies that when social self-efficacy is added in the model, the effect of mastery approach goal orientation on agentic engagement increased with increase in explanation of variance in the cognitive engagement from 6.90% to 12.0%. The indirect effect ($a*b$) was significant because the bootstrap confidence interval did not contain a zero BootLLCI, BootULCI (0.03, 0.08). Therefore, emotional self-efficacy mediates mastery approach goal orientation and agentic engagement.

Table A.1.9: The Mediation Effect of Academic Self-Efficacy (ASE) on the Relationship between Mastery Approach Goal Orientation (MAP) and Behavioural Engagement (BE)

Model	DV	IV/MV	β	t	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ASE	MAP	0.20	5.40	<.01	0.23	.054	46.23	0.04	0.12	0.27
2	BE	MAP	0.17	5.47	<.01	0.54	0.29	103.67	0.03	0.11	0.24
		ASE	0.44	11.2	<.01				0.04	0.36	0.52
3	BE	MAP	0.27	8.11	<.01	0.34	0.11	65.80	0.03	0.21	0.34
4	a*b		0.10							0.06	0.14

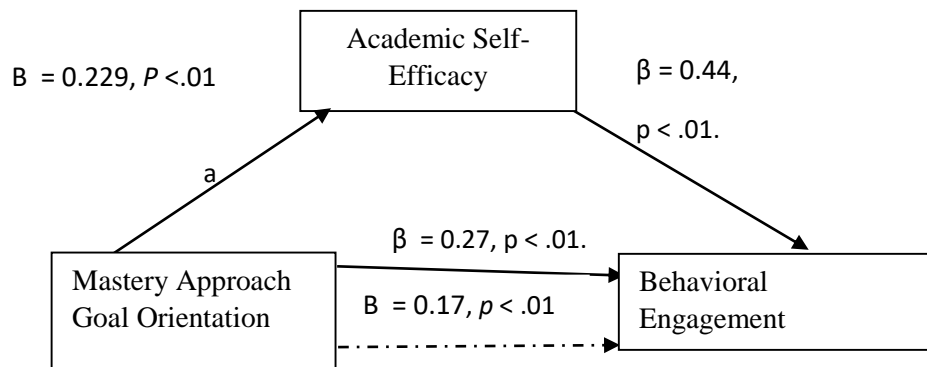


Figure A.1.9: The Mediation Effect of Academic Self-Efficacy on the Relationship Mastery Approach Goal Orientation and Behavioural Engagement

The study results in Table A.1.9 and Figure A.1.9 shows the mediation effect of academic self-efficacy on the relationship between mastery approach goal orientation and behavioural engagement. Model 1 was conducted to determine the regression effect of academic self-efficacy on the relationship between mastery approach goal orientation and behavioural engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. Path a of regressing emotional self-efficacy on MAP was statistically

significant (path a), $\beta = 0.229$, $t = 6.72$ $P < .01$ with $R^2 = 0.081$, which implies that MAP explained 8.1% variance in academic self-efficacy. The regression coefficient indicated that every unit increase in MAP, results in 0.22 increase in academic self-efficacy ($t = 6.72$, $p < .01$).

Model 2 shows results of the regression of behavioural engagement predicted by both mastery approach goal orientation and academic self-efficacy. Mastery approach goal orientation significantly predict behavioural engagement in the model (Paths c'), $\beta = 0.17$, $t = 5.47$, $P < .01$ and academic self-efficacy predicts behavioural engagement (path b), $\beta = 0.44$, $t = 11.19$, $p < .01$ with $R^2 = 0.290$. The R^2 value indicates that the model explains 29.0% of the variance in behavioural engagement.

Model 3 was conducted to determine the effect of mastery approach goal orientation on behavioural engagement when academic self-efficacy is not included in the model. Results indicate that mastery approach goal orientation significantly predicts behavioural engagement, (path c), $\beta = 0.27$, $t = 8.11$, $p < 0.01$. The R^2 value indicates that mastery approach goal orientation explains 11.47% of the variance in behavioural engagement. The beta coefficients for MAP in paths c and c' are different, with the latter value being lower. This implies that when academic self-efficacy was added in the model, the effect of mastery approach goal orientation on behavioural engagement increased with an increase in explanation of variance in the behavioural engagement from 11.47% to 29.0%. The indirect effect (a*b) was significant because the bootstrap confidence interval did not contain a zero BootLLCI, BootULCI (0.06, 0.14). Therefore, academic self-efficacy partially mediates mastery approach goal orientation and behavioural engagement.

Table A.1.10: The Mediation Effect of Academic Self-Efficacy (ASE) on the Relationship between Mastery Approach Goal Orientation (MAP) and Emotional Engagement (EE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LCI	ULCI
1	ASE	MAP	0.20	5.40	<.01	0.23	.054	46.23	0.04	0.12	0.27
2	EE	MAP	0.15	4.61	<.01	0.44	0.19	59.32	0.03	0.09	0.22
		ASE	0.34	8.15	<.01				0.04	0.26	0.42
3	EE	MAP	0.23	6.80	<.01	0.29	.090	46.29	0.04	0.16	0.30
4	a*b		0.08							0.05	0.11

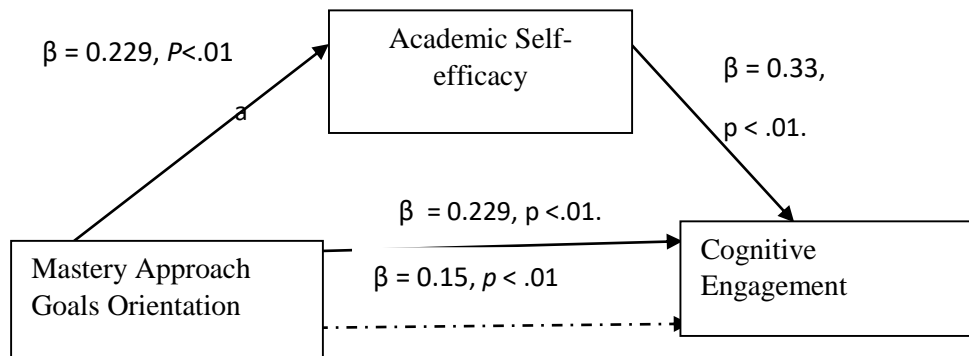


Figure A.1.10: The Mediation Effect of Academic Self-Efficacy on the Relationship Mastery Approach Goal Orientation and Emotional Engagement

The study results in Table A.1.10 and Figure A.1.10 shows the mediation effect of academic self-efficacy on the relationship between mastery approach goal orientation and emotional engagement. Model 1 was meant to determine the regression effect of academic self-efficacy on the relationship between mastery approach goal orientation and emotional engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. Path a of regressing academic self-efficacy on MAP was statistically significant (path a), $\beta = 0.229$, $t = 6.72$ $P < .01$ with $R^2 = 0.081$, which implies that MAP explained 8.1% variance in academic self-efficacy. The regression coefficient

indicated that every unit increase in MAP, results in 0.22 increase in academic self-efficacy ($t = 6.72, p < .01$).

Model 2 shows the results of the regression of emotional engagement predicted by both mastery approach goal orientation and academic self-efficacy. Mastery approach goal orientation significantly predict emotional engagement in the model (Paths c'), $\beta = 0.15, t = 4.59, P < .01$ and academic self-efficacy predicts cognitive engagement (path b), $\beta = 0.33, t = 8.14, p < .01$ with $R^2 = 0.189$. The R^2 value indicates that the model explains 19.0% of the variance in emotional engagement.

Model 3 was meant to determine the effect of mastery approach goal orientation on emotional engagement when academic self-efficacy is not included in the model. When academic self-efficacy is not in the model, mastery approach goal orientation significantly predicts emotional engagement, (path c), $\beta = 0.229, t = 6.80, p < 0.01$. The R^2 value indicates that mastery approach goal orientation explains 8.0% of the variance in emotional engagement. The beta coefficients for MAP in paths c and c' are different, with the latter value being lower. This implies that when academic self-efficacy is added in the model, the effect of mastery approach goal orientation on behavioural engagement increased with an increase in explanation of variance in the behavioural engagement from 8.0% to 19.0%. The indirect effect ($a*b$) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.05, 0.11). Therefore, academic self-efficacy mediates mastery approach goal orientation and emotional engagement.

Table A.1.11: The Mediation Effect of Academic Self-Efficacy (ASE) on the Relationship between Mastery Approach Goal Orientation (MAP) and Cognitive Engagement (CE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ASE	MAP	0.20	5.40	< .01	0.29	.082	45.23	0.04	0.12	0.27
2	CE	MAP	0.16	4.08	< .01	0.44	0.20	62.38	0.04	0.08	0.24
		ASE	0.43	8.79	< .01				0.05	0.34	0.53
3	CE	MAP	0.26	6.42	< .01	.075	.080	41.20	0.04	0.18	0.34
4	a*b		0.10							0.06	0.14

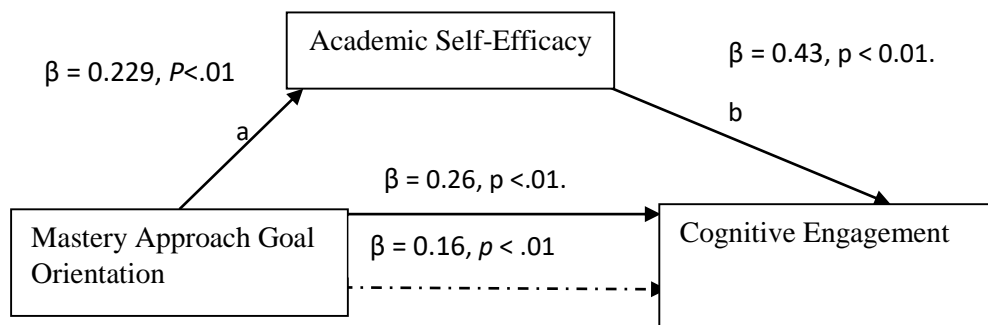


Figure A.1.11: The Mediation Effect of Academic Self-Efficacy on the Relationship Mastery Approach Goal Orientation and Cognitive Engagement

The study results in Table A.1.11 and figure A.1.11 shows the mediation effect of academic self-efficacy on the relationship between mastery approach goal orientation and cognitive engagement. Results in model 1, Path a of regressing academic self-efficacy on MAP was statistically significant (path a), $\beta = 0.229$, $t = 6.72$, $P < .01$ with $R^2 = 0.081$, which implies that MAP explained 8.1% variance in academic self-efficacy. The regression coefficient indicated that every unit increase in MAP, results in 0.22 increase in academic self-efficacy ($t = 6.72$, $p < .01$). Model 2 shows the results of the regression of cognitive engagement predicted by both mastery approach goal orientation and academic

self-efficacy. Mastery approach goal orientation significantly predicts cognitive engagement in the model (Paths c'), $\beta = 0.16$, $t = 4.08$, $P < .01$ and academic self-efficacy predicts cognitive engagement (path b), $\beta = 0.43$, $t = 8.79$, $p < .01$ with $R^2 = 0.197$. The R^2 value indicates that the model explains 20.0% of the variance in cognitive engagement.

Model 3 was conducted to determine the effect of mastery approach goal orientation on cognitive engagement when academic self-efficacy is not included in the model. When academic self-efficacy is not in the model, mastery approach goal orientation significantly predicts cognitive engagement (path c), $\beta = 0.26$, $t = 6.41$, $p < .01$. The R^2 value indicates that mastery approach goal orientation explains 7.5% of the variance in cognitive engagement. The beta coefficients for MAP in paths c and c' are different, with the latter value being lower. This implies that when academic self-efficacy is added in the model, the effect of mastery approach goal orientation on behavioural engagement increased with an increase in explanation of variance in the behavioural engagement from 7.5% to 20%.

The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.062, 0.14). Therefore, academic self-efficacy mediates mastery approach goal orientation and cognitive engagement.

Table A.1.12: The Mediation Effect of Academic Self-Efficacy (ASE) on the Relationship between Mastery Approach Goal Orientation (MAP) and Agentic Engagement (AGE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ASE	MAP	0.20	5.40	< .01	0.29	.082	45.23	0.04	0.12	0.27
2	AGE	MAP	0.14	3.50	= .005	0.49	0.24	79.10	0.04	0.06	0.24
		ASE	0.52	10.57	< .01				0.05	0.43	0.22
3	AGE	AGE	0.26	6.17	< .01	.26	.070	38.00	0.04	0.18	0.34
4	a*b		0.12							0.08	0.17

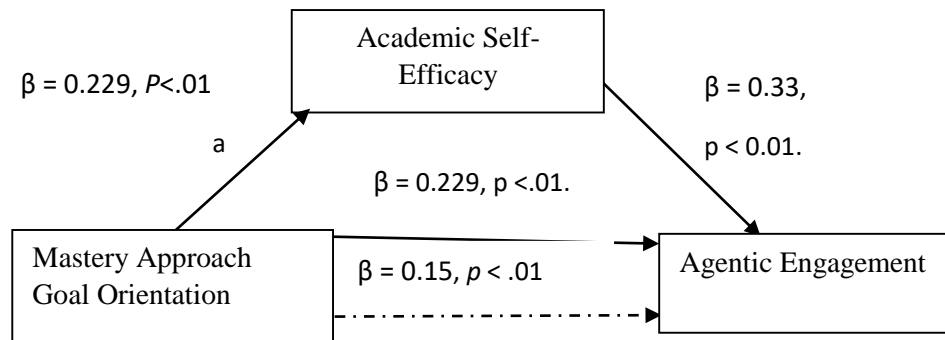


Figure A.1.12: The Mediation Effect of Academic Self-Efficacy on the Relationship Mastery Approach Goal Orientation and Agentic Engagement

The study results in Table A.1.12 and Figure A.1.12 shows the mediation effect of academic self-efficacy on the relationship between mastery approach goal orientation and agentic engagement.

Results in model 1, Path a of regressing academic self-efficacy on MAP was statistically significant (path a), $\beta = 0.229$, $t = 6.72$, $P < .01$ with $R^2 = 0.081$, which implies that MAP explained 8.1% variance in academic self-efficacy. The regression coefficient indicated that every unit increase in MAP, results in 0.22 unit increase in academic self-efficacy ($t = 6.72$, $p < .01$).

Model 2 shows results of the regression of agentic engagement predicted by mastery approach goal orientation and academic engagement when academic self-efficacy is included in the model. Mastery approach goal orientation significantly predicts agentic engagement in the model (Paths c'), $\beta = 0.13$, $t = 3.49$, $P < .01$ and academic self-efficacy predicts agentic engagement (path b), $\beta = 0.52$, $t = 10.57$, $p < .01$ with $R^2 = 0.237$. The R^2 value indicates that the model explains 23.7% of the variance in agentic engagement.

Model 3 was conducted to determine the effect of mastery approach goal orientation on agentic engagement when academic self-efficacy is not included in the model. When academic self-efficacy is not in the model, mastery approach goal orientation significantly predicts agentic engagement (path c), $\beta = 0.25$, $t = 6.16$, $p < .01$. The R^2 value indicates that mastery approach goal orientation explains 6.9% of the variance in agentic engagement. The beta coefficients for MAP in paths c and c' are different, with the latter value being lower. This implies that when academic self-efficacy is added in the model, the effect of mastery approach goal orientation on behavioural engagement increased with an increase in explanation of variance in the behavioural engagement from 6.0% to 23.7%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.078, 0.17). Therefore, academic self-efficacy mediates mastery approach goal orientation and agentic engagement.

Appendix A. 2: The Mediation Effect of Self-efficacy Sub-constructs on the Relationship between Performance Approach Goals and Academic Engagement Sub-constructs

The mediation effect of self-efficacy sub-constructs on the relationship between Performance approach goal orientation and academic engagement sub-constructs included 12 models;

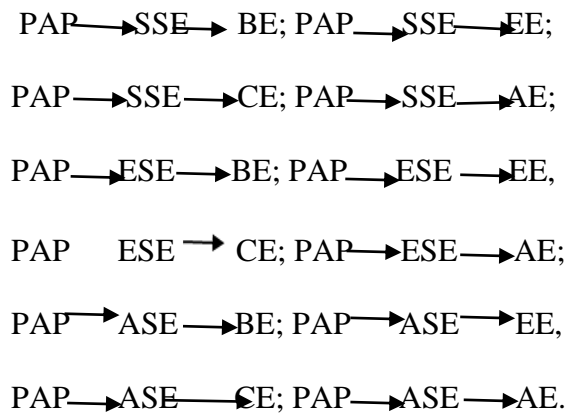


Table A.13: The Mediation Effect of Social Self-Efficacy (SSE) on the Relationship between Performance Approach Goal Orientation (PAP) and Behavioural Engagement (BE)

Model	DV	IV/MV	β	t	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SSE	PAP	0.19	6.07	<.01	0.26	0.07	36.90	0.03	0.13	0.25
2	BE	PAP	0.16	4.11	<.01	0.41	0.17	51.54	0.05	0.09	0.22
		SSE	0.36	4.47	<.01				0.05	0.27	0.45
3	BE	PAP	0.23	6.34	<.01	.27	.073	40.22	0.04	0.16	0.29
4	a*b		0.07							0.04	0.10

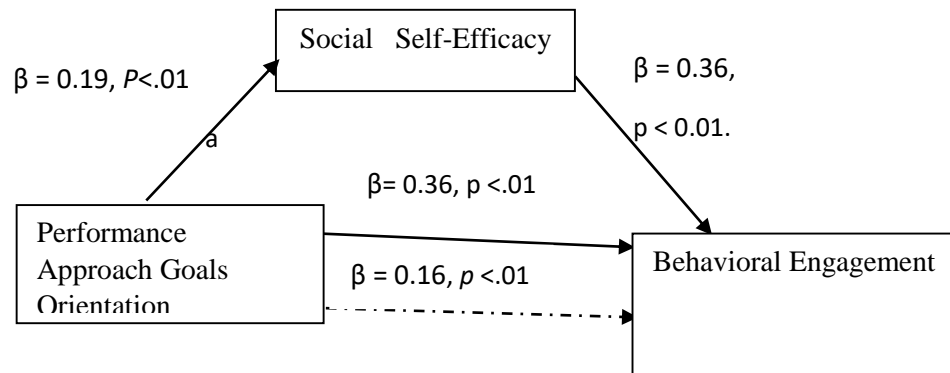


Figure A.2.1: Mediation Effect of Social Self-Efficacy on the Relationship between Performance Approach Achievement Goal Orientation and Behavioural Engagement

The study results in Table A.2.1 and Figure A.2.1 show the mediation effect of social self-efficacy on the relationship between performance approach goal orientation and behavioural engagement. Model 1 was conducted to determine the regression effect of social self-efficacy on the relationship between performance approach goal orientation and behavioural engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. Path a of regressing social self-efficacy on PAP was statistically significant (path a), $\beta = .19, t = 6.07, P < .01$ with $R^2 = 0.07$, which implies that PAP explained 6.7% variance in academic self-efficacy. The regression coefficient indicate that PAP significantly predict social self-efficacy.

Model 2 shows the results of the regression of behavioural engagement predicted by both PAP and SSE. When SSE is introduced to the model, PAP significantly predicts behavioural engagement in the model (Paths c'), $\beta = 0.156, t = 4.47, p < .01$ and SSE significantly predicts behavioural engagement (path b), $\beta = .36, t = 7.63, p < .01$ with $R^2 = 0.10$. Model 2 shows the total effect of the PAP on the behavioural engagement when the SSE is present in the

model. The R^2 value indicates that the model explains 10.0% of the variance in behavioural engagement.

Model 3 was conducted to determine the effect of PAP goal orientation on behavioural engagement when SSE is not included in the model. When social SSE is not in the model, PAP goal orientation significantly predicts behavioural engagement (path c), $\beta = 0.22$, $t = 6.07$, $p < .01$. The R^2 value indicates that PAP goal orientation explains 7.0% of the variance in behavioural engagement. The beta coefficients for PAP in paths c and c' are different, with the latter value being lower. This implies that when SSE is added in the model, the effect of PAP goal orientation on behavioural engagement increased with an increase in explanation of variance in the behavioural engagement from 7.0% to 17.0%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.041,0.100). Therefore, SSE mediates PAP goal orientation and behavioural engagement.

Table A.2.2: The Mediation Effect of social Self-Efficacy (SSE) on the Relationship between Performance Approach Goal Orientation (PAP) and Emotional Engagement (EE)

Model	DV	IV/MV	β	T	P	R	R^2	F	SE	Bootstrap LLCI	ULCI
1	SSE	PAP	0.19	6.07	<.01	0.26	0.07	36.90	0.03	0.13	0.25
2	EE	PAP	0.17	5.06	<.01	0.41	0.17	51.54	0.05	0.11	0.24
		SSE	0.34	7.33	<.01						
3	EE	PAP	0.24	6.90	<.01	.29	.080	47.35	0.03	0.17	0.31
4	a*b		0.06							0.05	0.11

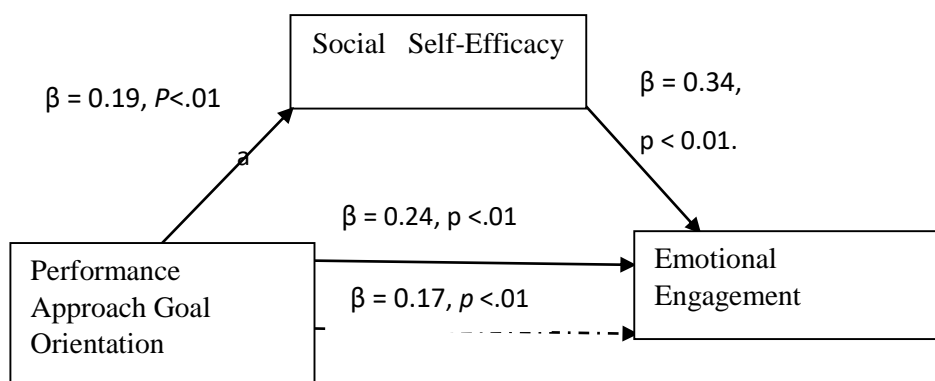


Figure A.2.2: Mediation Effect of social Self-Efficacy on the Relationship between Performance Approach Goal Orientation and Emotional Engagement

The study results in Table A.2.2 and Figure A.2.2 show the mediation effect of social self-efficacy on the relationship between PAP goal orientation and emotional engagement. Model 1 was conducted to determine the regression effect of SSE on the relationship between PAP goal orientation and emotional engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. Path a of regressing social self-efficacy on PAP was statistically significant (path a), $\beta = .19$, $t = 6.07$, $P < .01$ with $R^2 = 0.067$, which implies that PAP explained 6.7% variance in academic self-efficacy. The regression coefficient indicated that MAP significantly predict social self-efficacy.

Model 2 shows results of the regression of emotional engagement predicted by both PAP and SSE. When SSE is introduced to the model, PAP significantly predicts emotional engagement in the model (Paths c'), $\beta = 0.17$, $t = 5.50$, $p < .01$ and SSE significantly predicts emotional engagement (path b), $\beta = .34$, $t = 7.32$, $p < .01$ with $R^2 = 0.172$. Model 2 shows the total effect of the PAP on the emotional engagement when the SSE is present in the model.

The R^2 value indicates that the model explains 17.2% of the variance in emotional engagement.

Model 3 was conducted to determine the effect of PAP goal orientation on emotional engagement when SSE is not included in the model. When SSE is not in the model, PAP goal orientation significantly predicted emotional engagement (path c), $\beta = 0.24$, $t = 6.87$, $p < .01$. The R^2 value indicates that mastery avoidance goal orientation explains 8.0% of the variance in emotional engagement. The beta coefficients for PAP in paths c and c' are different, with the latter value being higher. This implies that when SSE is added in the model, the effect of PAP goal orientation on emotional engagement decreased with an increase in explanation of variance in emotional engagement from 8% to 17.2%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.05, 0.11). Therefore, SSE mediates PAP goal orientation and emotional engagement.

Table A.2.3: The Mediation Effect of social Self-Efficacy (SSE) on the Relationship between Performance Approach Goal Orientation (PAP) and Cognitive Engagement (CE)

Model	DV	IV/MV	β	t	P	R	R^2	F	SE	Bootstrap LLCI	ULCI
1	SSE	PAP	0.19	6.07	<.01	0.26	0.07	36.90	0.03	0.13	0.25
2	CE	PAP	0.11	2.60	<.01	0.35	.123	35.52	0.04	0.03	0.19
		SSE	0.40	7.06	<.01				0.06	0.29	0.52
3	CE	PAP	0.19	4.41	<.01	.19	.040	19.23	0.04	0.10	0.27
4	a*b		0.08							0.05	0.11

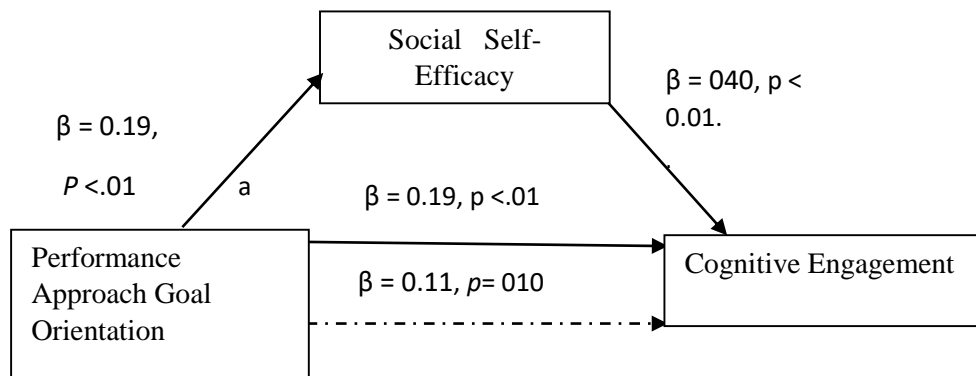


Figure A.2.3: Mediation Effect of social Self-Efficacy on the Relationship between Performance Approach Goal Orientation and Cognitive Engagement

The study results in Table A.2.3 and Figure A.2.3 show the mediation effect of SSE on the relationship between PAP goal orientation and cognitive engagement. Model 1 was conducted to determine the regression effect of SSE on the relationship between PAP goal orientation and cognitive engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. Path a of regressing social self-efficacy on PAP was statistically significant (path a), $\beta = .19$, $t = 6.07$, $P < .01$ with $R^2 = 0.067$, which implies that PAP explained 6.7% variance in academic self-efficacy. The regression coefficient indicated that MAP significantly predict social self-efficacy.

Model 2 shows results of the regression of cognitive engagement predicted by both PAP and SSE. When SSE is introduced to the model, PAP significantly predicts cognitive engagement in the model (Paths c'), $\beta = 0.11$, $t = 2.59$, $p = .010$ and SSE significantly predicts cognitive engagement (path b), $\beta = .40$, $t = 7.06$, $p .01$ with $R^2 = 0.123$. Model 2 shows the total effect of the PAP on the cognitive engagement when the SSE is present in the model. The

R² value indicates that the model explains 12.3% of the variance in cognitive engagement.

Model 3 was conducted to determine the effect of PAP goal orientation on cognitive engagement when SSE was not included in the model and results indicate that PAP goal orientation significantly predicts cognitive engagement (path c), $\beta = 0.19$, $t = 4.38$, $p < .01$. The R² value indicates that PAP goal orientation explains 3.7% of the variance in cognitive engagement. The beta coefficients for PAP in paths c and c' are different, with the latter value being higher. This implies that when SSE is added in the model, the effect of PAP goal orientation on cognitive engagement decreased with an increase in explanation of variance in cognitive engagement from 3.7% to 12.3%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.05, 0.11). Therefore, SSE mediates PAP goal orientation and cognitive engagement.

Table A.2.4: The Mediation Effect of social Self-Efficacy (SSE) on the Relationship between Performance Approach Goal Orientation (PAP) and Agentic Engagement (AGE)

Model	DV	IV/MV	β	t	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SSE	PAP	0.19	6.07	<.01	0.26	0.07	36.90	0.03	0.13	0.25
2	AGE	PAP	0.14	3.19	=.002	0.36	.13	38.22	0.04	0.05	0.22
		SSE	0.41	7.03	<.01				0.06	0.30	0.53
3	AGE	PAP	0.22	4.97	<.01	.22	.05	24.70	0.04	0.13	0.30
4	a*b		0.08							0.05	0.12

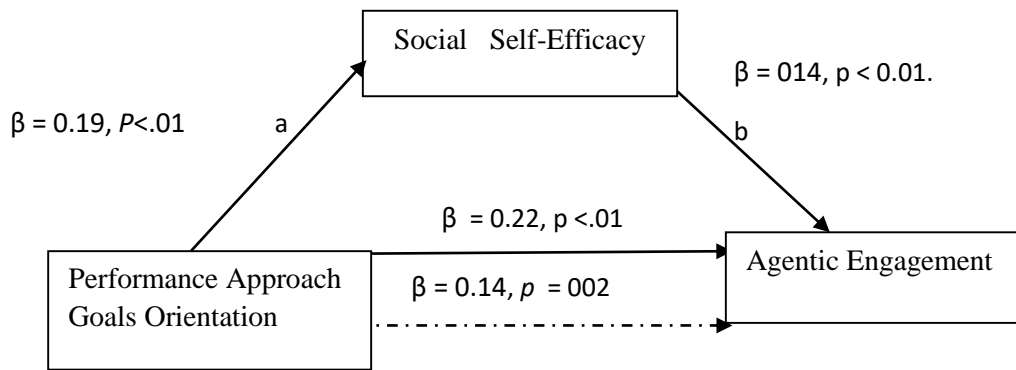


Figure A.2.4: Mediation Effect of social Self-Efficacy on the Relationship between Performance Approach Goal Orientation and Agentic Engagement

The study results in Table A.2.4 Figure A.2.4 above show the mediation effect of SSE on the relationship between PAP goal orientation and agentic engagement. Results in model, of regressing social self-efficacy on PAP was statistically significant (path a), $\beta = .19$, $t = 6.07$, $P < .01$ with $R^2 = 0.067$, which implies that PAP explained 6.7% variance in academic self-efficacy. The regression coefficient indicates that PAP significantly predicts social self-efficacy. Model 2 shows the results of the regression of agentic engagement when SSE is introduced to the model. Results indicate that PAP significantly predicts agentic engagement in the model (Path c'), $\beta = 0.14$, $t = 3.19$, $p = .002$ and SSE significantly predicts agentic engagement (path b), $\beta = .14$, $t = 7.02$, $p < .01$ with $R^2 = 0.13$. The R^2 value indicates that the model explains 13.0% of the variance in agentic engagement.

Model 3 was conducted to determine the effect of PAP goal orientation on agentic engagement when SSE is not included in the model. Results indicate that PAP goal orientation significantly predicts agentic engagement (path c), $\beta = 0.22$, $t = 4.97$, $p < .01$. The R^2 value indicates that PAP goal orientation explains 4.6% of the variance in cognitive engagement.

The beta coefficients for PAP in paths c and c' are different, with the latter value being lower. This implies that when SSE was added in the model, the effect of PAP goal orientation on agentic engagement decreased with an increase in explanation of variance in the agentic engagement from 4.6% to 13.0%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.050, 0.12). Therefore, SSE mediates PAP goal orientation and agentic engagement.

Table A.2.5: The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Performance Approach Goal Orientation (PAP) and Behavioural Engagement (BE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ESE	PAP	0.17	4.61	<.01	0.21	0.04	20.87	0.04	0.11	0.25
2	BE	PAP	0.19	5.43	<.01	0.33	.109	31.11	0.04	0.12	0.26
		ESE	0.19	4.52	<.01				0.04	0.11	0.27
3	BE	PAP	0.23	6.34	<.01	.27	.073	40.22	0.04	0.13	0.30
4	a*b		0.03							0.01	0.06

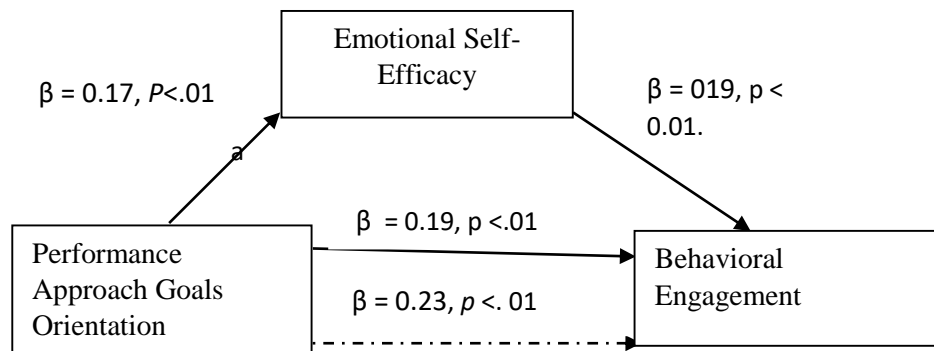


Figure A.2.5: The Mediation Effect of Emotional Self-Efficacy on the Relationship between Performance Approach Goal Orientation and Behavioural Engagement

The study results in Table A.2.5 and Figure A.2.5 show the mediation effect of emotional self-efficacy (ESE) on the relationship between PAP goal orientation and cognitive engagement. Model 1 was conducted to determine the regression

effect of ESE on the relationship between PAP goal orientation and behavioural engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. Path a of regressing social self-efficacy on PAP was statistically significant (path a), $\beta = .17$, $t = 4.57$, $P < .01$ with $R^2 = 0.040$, which implies that PAP explained 4.0% variance in academic self-efficacy. The regression coefficient indicated that PAP significantly predicts emotional self-efficacy.

Model 2 shows results of the regression of behavioural engagement predicted by both PAP and ESE. When ESE is introduced to the model, PAP significantly predicts behavioural engagement in the model (Paths c'), $\beta = 0.19$, $t = 5.43$, $p < .01$ and ESE significantly predicts behavioural engagement (path b), $\beta = .19$, $t = 4.52$, $p < .01$ with $R^2 = 0.11$. Model 2 shows the total effect of the PAP on the behavioural engagement when the ESE is present in the model. The R^2 value indicates that the model explains 11.0% of the variance in behavioural engagement.

Model 3 was conducted to determine the effect of PAP goal orientation on behavioural engagement when ESE is not included in the model and results indicate that PAP goal orientation significantly predicts behavioural engagement (path c), $\beta = 0.23$, $t = 6.34$, $p < .01$. The R^2 value indicates that PAP goal orientation explained 7.3% of the variance in behavioural engagement. The beta coefficients for PAP in paths c and c' are different, with the latter value being higher. This implies that when ESE was added in the model, the effect of PAP goal orientation on behavioural engagement decreased with an increase in explanation of variance in the behavioural engagement from 7.3% to 11.0%. The indirect effect ($a*b$) was significant because the bootstrap

confidence interval did not contain a zero BootLLCI, BootULCI (0.01, 0.06).

Therefore, ESE mediates PAP goal orientation and behavioural engagement.

Table A.2.6: The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Performance Approach Goal Orientation (PAP) and Emotional Engagement (EE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ESE	PAP	0.17	4.61	<.01	0.21	0.04	20.87	0.04	0.11	0.25
2	EE	PAP	0.20	5.84	<.01	0.37	.134	39.42	0.03	0.13	0.26
		ESE	0.21	5.39	<.01				0.04	0.14	0.27
3	EE	PAP	0.24	6.87	<.01	.29	.084	47.15	0.03	0.17	0.31
4	a*b		0.04							0.02	0.06

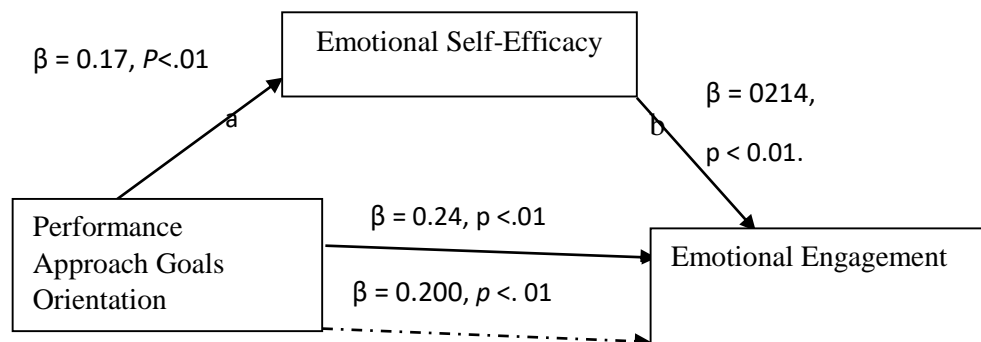


Figure A.2.6: The Mediation Effect of emotional Self-Efficacy on the Relationship between Performance Approach Goal Orientation and Emotional Engagement

The study results in Table A.2.6 and Figure A.2.6 show the mediation effect of ESE on the relationship between PAP goal orientation and emotional engagement. Results in model 1 indicate that regressing social self-efficacy on PAP was statistically significant (path a), $\beta = .17$, $T = 4.57$, $P < .01$ with $R^2 = 0.040$, which implies that PAP explains 4.0% variance in academic self-efficacy. The regression coefficient indicated that PAP significantly predict ESE. Model 2 shows the results of the regression of emotional engagement

when ESE was introduced to the model. Results indicate that PAP significantly predicts emotional engagement in the model (Paths c'), $\beta = 0.200$, $t = 5.84$, $p < .01$ and ESE significantly predicts emotional engagement (path b), $\beta = .214$, $t = 5.39$, $p < .01$ with $R^2 = 0.135$. The R^2 value indicates that the model explains 13.5% of the variance in emotional engagement.

Results in model 3 indicate that when ESE was not in the model, PAP goal orientation significantly predicted emotional engagement (path c), $\beta = 0.24$, $t = 6.87$, $p < .01$. The R^2 value indicates that PAP goal orientation explains 8.5% of the variance in emotional engagement. The beta coefficients for PAP in paths c and c' are different, with the latter value being higher. This implies that when ESE was added in the model, the effect of PAP goal orientation on emotional engagement decreased with an increase in explanation of variance in the emotional engagement from 8.5% to 13.5%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.02, 0.06). Therefore, ESE partially mediates PAP goal orientation and emotional engagement.

Table A.2.7: The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Performance Approach Goal Orientation (PAP) and Cognitive Engagement (CE)

Model	DV	IV/MV	β	T	P	R	R^2	F	SE	Bootstrap LLCI	ULCI
1	ESE	PAP	0.17	4.61	< .01	0.21	0.04	20.87	0.04	0.11	0.25
2	CE	PAP	0.13	3.04	<.01	0.36	.13	38.04	0.04	0.04	0.21
		ESE	0.35	7.40	< .01				0.05	0.26	0.45
3	CE	PAP	0.19	4.39	<.01	.19	.036	19.22	0.04	0.10	0.27
4	a*b		0.06							0.03	0.10

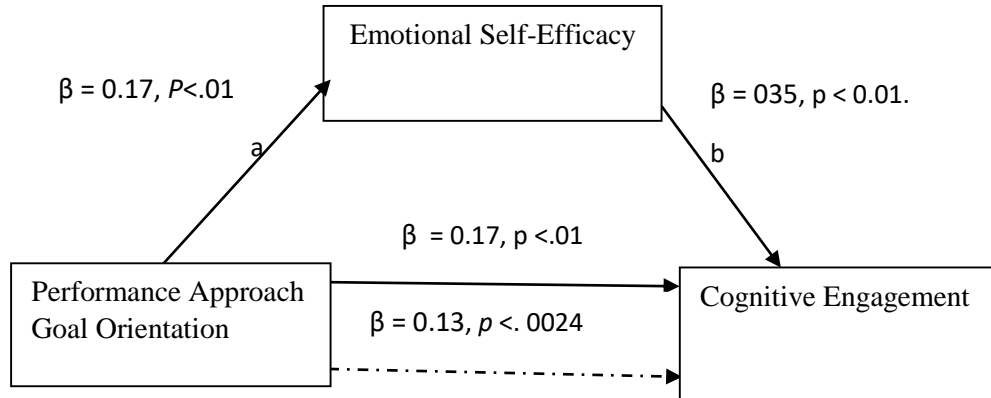


Figure A.2.7: The Mediation Effect of emotional Self-Efficacy on the Relationship between Performance Approach Goal Orientation and Cognitive Engagement

The study results in Table A.2.7 and Figure A.2.7 above shows the mediation effect of ESE on the relationship between PAP goal orientation and cognitive engagement. Results in model indicate that regressing social self-efficacy on PAP was statistically significant (path a), $\beta = .17$, $t = 4.57$, $P < .01$ with $R^2 = 0.040$, which implies that PAP explained 4.0% variance in academic self-efficacy. The regression coefficient indicated that PAP significantly predicts social self-efficacy. Model 2 shows the results of the regression of cognitive engagement predicted by both PAP and ESE. When ESE is introduced to the model, PAP significantly predicts cognitive engagement in the model (Paths c'), $\beta = 0.126$, $t = 3.04$, $p = .0024$ and ESE significantly predicts cognitive engagement (path b), $\beta = .0354$, $t = 7.40$, $p < .01$ with $R^2 = 0.130$. The R^2 value indicates that the model explains 13.0% of the variance in cognitive engagement.

Results in model 3 indicate that when ESE is not in the model, PAP goal orientation significantly predicts cognitive engagement (path c), $\beta = 0.17$, $t = 4.38$, $p < .01$. The R^2 value indicates that PAP goal orientation explains 3.6% of the variance in cognitive engagement. The beta coefficients for PAP in paths c

and c' are different, with the latter value being higher. This implies that when ESE was added in the model, the effect of PAP goal orientation on cognitive engagement decreased with an increase in explanation of variance in the cognitive engagement 3.6% to 13.0%. The indirect effect ($a*b$) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.03, 0.10). Therefore, ESE mediates PAP goal orientation and cognitive engagement.

Table A. 2.8: The Mediation Effect of emotional Self-Efficacy (ESE) on the Relationship between Performance Approach Goal Orientation (PAP) and Agentic Engagement (AE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ESE	PAP	0.17	4.61	<.01	0.21	0.04	20.87	0.04	0.11	0.25
2	AGE	PAP	0.17	3.91	=.0001	0.32	.10	28.21	0.04	0.08	0.25
		ESE	0.28	5.50	<.01				0.05	0.17	0.37
3	AGE	PAP	0.22	4.97	<.01	0.22	.050	24.71	0.04	0.13	0.30
4	a*b		0.05							0.02	0.08

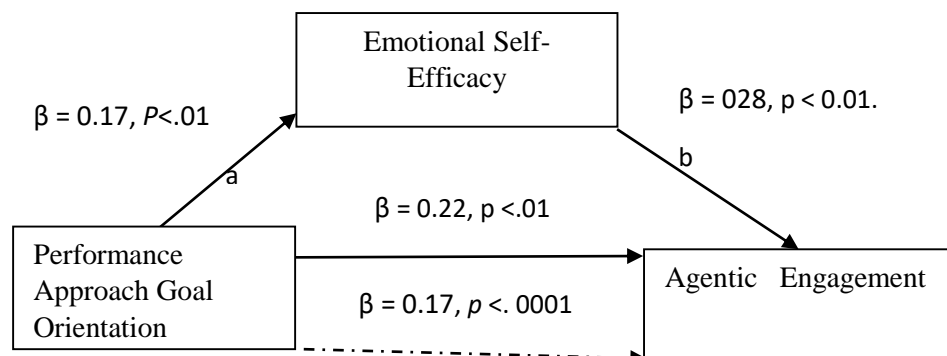


Figure A. 2.8: The Mediation Effect of emotional Self-Efficacy on the Relationship between Performance Approach Goal Orientation and Agentic Engagement

The study results in Table A.2.8 Figure A.2.8 above show the mediation effect of ESE on the relationship between PAP goal orientation and agentic

engagement. Results in model 1 indicate that regressing social self-efficacy on PAP was statistically significant (path a), $\beta = .17$, $t = 4.57$, $P < .01$ with $R^2 = 0.040$, which implies that PAP explained 4.0% variance in academic self-efficacy. The regression coefficient indicated that MAP significantly predict social self-efficacy. Results in model 2 indicate that when ESE is introduced to the model, PAP significantly predicts agentic engagement in the model (Paths c'), $\beta = 0.17$, $t = 3.91$, $p = .0001$ and ESE significantly predicts agentic engagement (path b), $\beta = .028$, $t = 5.50$, $p < .01$ with $R^2 = 0.100$. The R^2 value indicates that the model explains 10.0% of the variance in agentic engagement.

Results in model 3 indicate that when ESE is not in the model, PAP goal orientation significantly predicts agentic engagement (path c), $\beta = 0.22$, $t = 4.97$, $p < .01$. The R^2 value indicates that PAP goal orientation explains 4.6% of the variance in agentic engagement. The beta coefficients for PAP in paths c and c' are different, with the latter value being lower. This implies that when ESE was added in the model, the effect of PAP goal orientation on agentic engagement decreased with an increase in explanation of variance in the agentic engagement from 4.6% to 10.0%. The indirect effect ($a*b$) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.02, 0.08). Therefore, ESE mediates PAP goal orientation and agentic engagement.

Table A.2.9: The Mediation Effect of Academic Self-Efficacy (ASE) on the Relationship between Performance Approach Goal Orientation (PAP) and Behavioural Engagement (BE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ASE	PAP	0.21	6.08	<.01	0.26	0.07	26.91	0.04	0.14	0.28
2	BE	PAP	0.13	3.83	=.0001	0.52	.27	93.61	0.03	0.06	0.19
		ASE	0.46	11.67	<.01				0.04	0.39	0.54
3	BE	PAP	0.23	6.34	<.01	0.27	.073	40.22	0.04	0.16	0.29
4	a*b		0.11							0.08	0.17

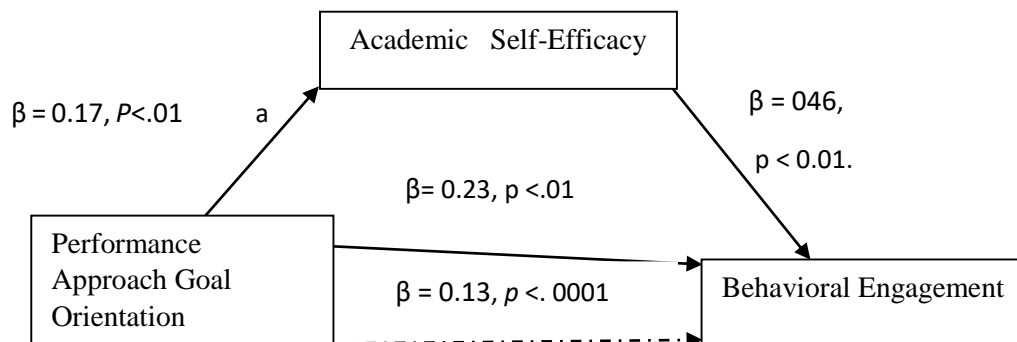


Figure A.2.9: The Mediation Effect of Academic Self-Efficacy on the Relationship between Performance Approach Goal Orientation and Behavioural Engagement

The study results in Figure A.2.9 and Table A.2.9 presents the mediation effect of ASE on the relationship between PAP goal orientation and behavioural engagement. Results in model 1 indicate that regressing social self-efficacy on PAP was statistically significant (path a), $\beta = .14$, $t = 6.77$, $P < .01$ with $R^2 = 0.068$, which implies that PAP explained 6.8% variance in academic self-efficacy. The regression coefficient imply that PAP goal orientation significantly predicts ASE. Results in model 2 indicate that when ASE was introduced to the model, PAP significantly predicted behavioural engagement (Paths c'), $\beta = 0.126$, $t = 3.85$, $p = .0001$ and ASE significantly predicted behavioural engagement (path b), $\beta = .046$, $t = 11.67$, $p < 01$ with $R^2 = 0.270$.

Model 2 results imply that academic self-efficacy partially mediates PAP goal orientation and behavioural engagement. The R^2 value indicates that the model explains 27.0% of the variance in behavioural engagement.

Model 3 was conducted to determine the effect of PAP goal orientation on behavioural engagement when ASE was not included in the model. Results indicate that PAP goal orientation significantly predicts behavioural engagement (path c), $\beta = 0.23$, $t = 6.34$, $p < .01$. The R^2 value indicates that PAP goal orientation explains 7.3% of the variance in behavioural engagement. The beta coefficients for PAP in paths c and c' are different, with the latter value being lower. This implies that when ASE is added in the model, the effect of PAP goal orientation on behavioural engagement decreased with an increase in explanation of variance in the behavioural engagement from 7.3 % to 27.0%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.08, 0.17). Therefore, ASE mediates PAP goal orientation and behavioural engagement.

Table A.2.10: The Mediation Effect of Academic Self-Efficacy (ASE) on the Relationship between Performance Approach Goal Orientation (PAP) and emotional Engagement (EE)

Model	DV	IV/MV	β	T	P	R	R^2	F	SE	Bootstrap LLCI	ULCI
1	ASE	PAP	0.21	6.08	<.01	0.26	0.07	26.91	0.04	0.14	0.28
2	EE	PAP	0.16	4.90	<.01	0.44	.19	61.03	0.03	0.10	0.23
		ASE	0.34	8.28	<.01				0.04	0.26	0.42
3	EE	PAP	0.24	6.87	<.01	0.29	.08	47.15	0.03	0.17	0.31
4	a*b		0.07							0.04	0.10

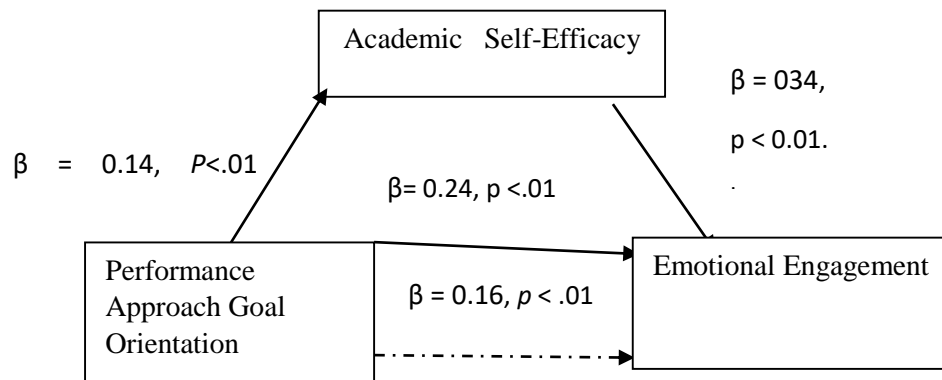


Figure A.2.10: The Mediation Effect of Academic Self-Efficacy on the Relationship between Performance Approach Goal Orientation and Emotional Engagement

The study results in Table A.2.10 Figure A.2.10 above shows the mediation effect of ASE on the relationship between PAP goal orientation and emotional engagement. Results in model 1 indicate that regressing social self-efficacy on PAP was statistically significant (path a), $\beta = .14$, $t = 6.77$, $P < .01$ with $R^2 = 0.068$, which implies that PAP explained 6.8% variance in academic self-efficacy. The regression coefficient imply that PAP significantly predicts ASE. Model 2 shows the results of the regression of emotional engagement predicted by both PAP and ASE. When ASE is introduced to the model, PAP significantly predicts emotional engagement in the model (Paths c'), $\beta = 0.16$, $t = 4.90$, $p < .01$ and ASE significantly predicts emotional engagement (path b), $\beta = .34$, $t = 8.28$, $p < .01$ with $R^2 = 0.190$. The R^2 value indicates that the model explains 19.0% of the variance in emotional engagement.

Results in model 3 indicate that when ASE was not in the model, PAP goal orientation significantly predicts emotional engagement (path c), $\beta = 0.24$, $t = 6.87$, $p < .01$. The R^2 value indicates that PAP goal orientation explains 8.5% of the variance in agentic engagement. The beta coefficients for PAP in paths c and c' are different, with the latter value being lower. This implies that when

ASE is added in the model, the effect of PAP goal orientation on emotional engagement decreased with an increase in explanation of variance in the emotional engagement 8.5% to 19%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.044, 0.105). Therefore, ASE mediates PAP goal orientation and emotional engagement.

Table A.2.11: The Mediation Effect of Academic Self-Efficacy(ASE) on the Relationship between Performance Approach Goal Orientation(PAP) and Cognitive Engagement(CE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ASE	PAP	0.21	6.08	<.01	0.26	0.07	26.91	0.04	0.14	0.28
2	CE	PAP	0.09	4.90	=.03	0.42	.18	55.09	0.04	0.007	0.168
		ASE	0.46	2.14	<.01				0.05	0.367	0.561
3	ASE	PAP	0.19	4.39	<.01	0.19	.037	19.22	0.04	0.10	0.27
4	a*b		0.11							0.064	0.142

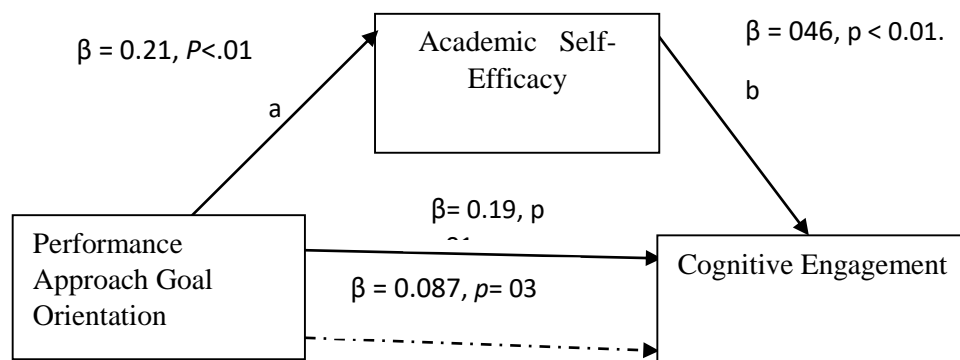


Figure A.2.11: The Mediation Effect of Academic Self-Efficacy on the Relationship between Performance Approach Goal Orientation and Academic Engagement

The study results in Table A.2.11 Figure A.2.11 show the mediation effect of ASE on the relationship between PAP goal orientation and cognitive

engagement. Results in model 1 indicate that regressing academic self-efficacy on PAP was statistically significant (path a), $\beta = .21$, $t = 6.77$, $P < .01$ with $R^2 = 0.068$, which implies that PAP explained 6.8% variance in academic self-efficacy. The regression coefficient indicated that PAP significantly predicts ASE. Results in model 2 indicate that when ASE was introduced to the model, PAP significantly predicted cognitive engagement (Paths c'), $\beta = 0.087$, $t = 2.14$, $p = .03$ and ASE significantly predicted cognitive engagement (path b), $\beta = .046$, $t = 9.36$, $p < .01$ with $R^2 = 0.180$. Model 2 results imply that PAP had a direct positive effect on cognitive engagement even when ASE was added in the model. The R^2 value indicates that the model explains 18.0% of the variance in cognitive engagement.

Results in model 3 indicate that when ASE was not in the model, PAP goal orientation significantly predicted cognitive engagement (path c), $\beta = 0.19$, $t = 4.38$, $p < .01$. The R^2 value indicates that PAP goal orientation explained 3.7% of the variance in cognitive engagement. The beta coefficients for PAP in paths c and c' are different, with the latter value being lower. This implies that when ASE was added in the model, the effect of PAP goal orientation on cognitive engagement decreased with an increase in explanation of variance in the cognitive engagement from 3.7% to 18.0%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.064, 0.142). Therefore, ASE mediates PAP goal orientation and cognitive engagement.

Table A.2.12: The Mediation Effect of Academic Self-Efficacy on the Relationship between Performance Approach Goal Orientation and Agentic Engagement

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ASE	PAP	0.21	6.08	< .01	0.26	0.07	26.91	0.04	0.14	0.28
2	AGE	PAP	0.10	4.90	= .013	0.48	.23	75.16	0.04	0.02	0.18
		ASE	0.54	2.48	< .01				0.05	0.44	0.64
3	AGE	PAP	0.22	4.97	< .01	0.22	.05	24.71	0.04	0.13	0.30
4	a*b		0.12							0.07	0.16

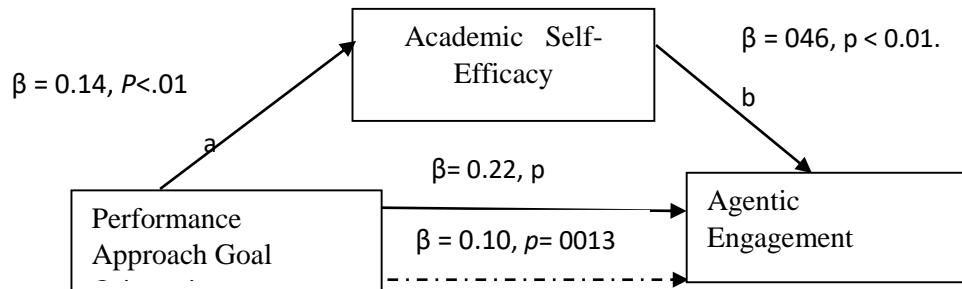


Figure A.2.12: The Mediation Effect of Academic Self-Efficacy on the Relationship between Performance Approach Goal Orientation and Agentic Engagement

The study results in Table A.2.12 Figure A.2.12 shows the mediation effect of ASE on the relationship between PAP goal orientation and agentic engagement. Results in model 1 indicate that regressing academic self-efficacy on PAP was statistically significant (path a), $\beta = .14, T = 6.77, P < .01$ with $R^2 = 0.068$, which implies that PAP explained 6.8% variance in academic self-efficacy. The regression coefficient imply that PAP significantly predicts ASE. Results in model 2 indicate that when ASE was introduced to the model, PAP significantly predicted agentic engagement (Paths c'), $\beta = 0.10, t = 2.48, p = .0013$ and ASE

significantly predicts agentic engagement (path b), $\beta = .054$, $t = 10.95$, $p < .01$ with $R^2 = 0.230$. Model 2 shows the total effect of the PAP on the agentic engagement when the ASE is added in the model. The R^2 value indicates that the model explains 23.0% of the variance in agentic engagement.

Results in model 3 indicates that PAP goal orientation significantly predicts agentic engagement (path c), $\beta = 0.22$, $t = 4.97$, $p < .01$ when academic self-efficacy was not included in the model. The R^2 value indicates that PAP goal orientation explains 4.6% of the variance in agentic engagement. The beta coefficients for PAP in paths c and c' are different, with the latter value being higher. This implies that when ASE was added in the model, the effect of PAP goal orientation on agentic engagement decreased with an increase in explanation of variance in the agentic engagement from 4.6% to 23%. The indirect effect ($a*b$) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.07, 0.16). Therefore, ASE mediates PAP goal orientation and agentic engagement.

Appendix A. 3: The Mediation Effect of Self-Efficacy on the Relationship between Mastery Avoidance Goal Orientation and Academic Engagement

The mediation effect of self-efficacy sub-constructs on the relationship between mastery avoidance goal orientation and academic engagement sub-constructs included 12 models;

MAV → SSE → BE; MAV → SSE → EE;
 MAV → SSE → CE; MAV → SSE → AE;
 MAV → ESE → BE; MAV → ESE → EE,
 MAV → ESE → CE; MAV → ESE → AE;
 MAV → ASE → BE; MAV → ASE → EE;
 MAV → ASE → CE; MAV → ASE → AE.

Table A.3.1: The Mediation Effect of Social Self-Efficacy on the Relationship between Mastery Avoidance Goal Orientation and Behavioural Engagement

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SSE	MAV	0.14	5.58	<.01	0.24	0.06	32.29	0.02	0.09	0.19
2	BE	MAV	0.05	1.90	= .65	0.38	.14	41.95	0.04	-0.003	0.104
		SSE	0.39	8.24	<.01				0.05	0.300	0.489
3	BE	MAV	0.06	3.75	= .0002	0.16	.027	14.05	0.03	0.05	0.16
4	a*b		0.06							0.03	0.08

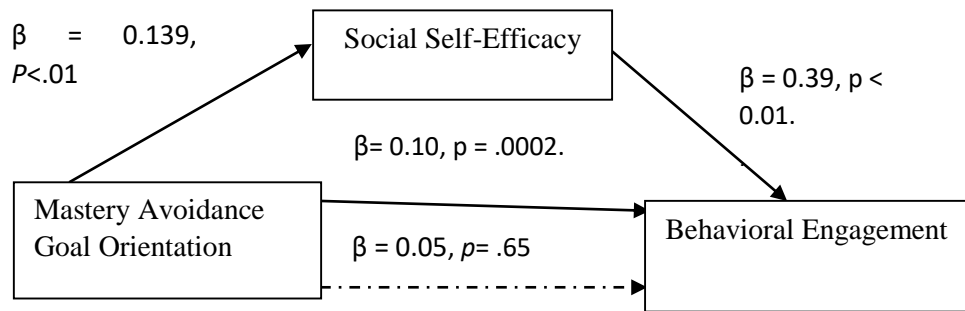


Figure A.3.1: The Mediation Effect of Social Self-Efficacy on the Relationship between Mastery Avoidance Goal Orientation and Behavioural Engagement

The study results in Table A.3.1 Figure A.3.1 show the mediation effect of social self-efficacy on the relationship between mastery avoidance goal orientation and behavioural engagement. Results in model 1 indicate that regressing social self-efficacy on MAV was statistically significant (path a), $\beta = 0.139$, $t = 5.68$, $P < .01$ with $R^2 = 0.059$, which implies that MAV explained 5.9% variance in social self-efficacy. The regression coefficient indicated that every unit increase in MAV, resulted in 0.14 increase in social self-efficacy ($t = 5.68$, $p < .01$). Results in model 2 while mastery avoidance goal orientation did not significantly predict behavioural engagement when social self-efficacy was introduced in the model (Paths c'), $\beta = 0.05$, $t = 1.85$, $P = .65$, social self-efficacy predicted behavioural engagement (path b), $\beta = 0.39$, $t = 8.24$, $p < .01$ with $R^2 = 0.142$. The R^2 value indicates that the model explains 14.2% of the variance in behavioural engagement. Results imply that social self-efficacy fully mediates the relationship between mastery avoidance achievement goal orientation and behavioural engagement.

Results in model 3 indicate that when social self-efficacy is not in the model, mastery avoidance goal orientation significantly predicts behavioural engagement (path c), $\beta = 0.10$, $t = 3.74$, $p = 0.0002$. The R^2 value indicates that

mastery avoidance goal orientation explains 2.6% of the variance in behavioural engagement. The beta coefficients for MAV in paths c and c' are different, with the later value being lower. This implies that when social self-efficacy is added in the model, the effect of mastery avoidance goal orientation on behavioural engagement reduced with increased explanation of variance in the behavioural engagement from 2.6% to 14.2%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.03, 0.08). Therefore, social self-efficacy mediates mastery avoidance goal orientation and behavioural engagement.

Table A.3.2: The Mediation Effect of Social Self-Efficacy (SSE) on the Relationship between Mastery Avoidance Goal Orientation (MAV) and Emotional Engagement (EE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SSE	MAV	0.14	5.58	< .01	0.24	0.06	32.29	0.02	0.09	0.19
2	EE	MAV	0.04	1.32	= .19	0.37	.134	39.12	0.03	-0.02	0.09
		SSE	0.38	8.16	< .01				0.05	0.29	0.48
3	EE	MAV	0.09	3.21	= .0014	0.14	.021	10.33	0.03	0.03	0.14
4	a*b		0.05							0.03	0.08

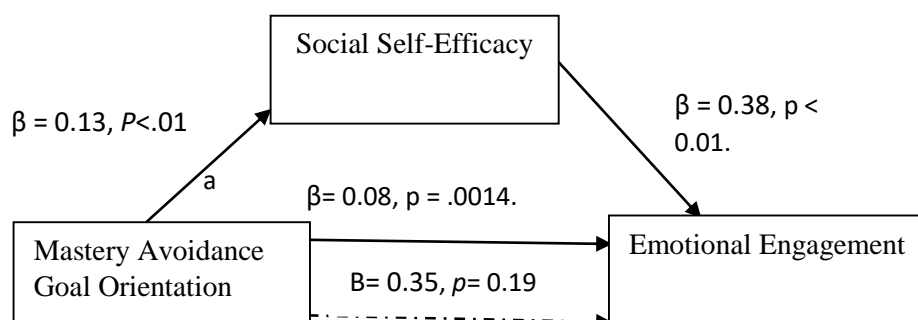


Figure A.3.2: The Mediation Effect of Social Self-Efficacy on the Relationship between Mastery Avoidance Goal Orientation and Emotional Engagement

The study results in Table A.3.2 and Figure A.3.2 show the mediation effect of social self-efficacy on the relationship between mastery avoidance goal orientation and emotional engagement. Results in model 1 indicate that regressing social self-efficacy on MAV was statistically significant (path a), $\beta = 1.3$, $t = 5.68$, $P < .01$ with $R^2 = 0.059$, which implies that MAV explained 5.9% variance in social self-efficacy. The regression coefficient indicated that MAV significantly predict social self-efficacy.

Model 2 shows the results of the regression of emotional engagement predicted by both mastery avoidance goal orientation and social self-efficacy. While mastery avoidance goal orientation did not significantly predict emotional engagement (Paths c'), $\beta = 0.35$, $t = 1.31$, $P = .19$ and social self-efficacy does significantly predict emotional engagement, (path b), $\beta = .38$, $t = 8.15$, $p < .01$. with $R^2 = 0.133$. Model 2 shows the total effect of the MAV on the emotional engagement when the social self -efficacy was present in the model. The R^2 value indicates that the model explains 13.3 % of the variance in emotional engagement.

In model 3, when social self-efficacy was not in the model, mastery avoidance goal orientation significantly predicted emotional engagement (path c), $\beta = 0.08$, $t = 3.21$, $p = 0.0014$. The R^2 value indicates that mastery avoidance goal orientation explains 2.1 % of the variance in emotional engagement. The beta coefficients for MAV in paths c and c' are different, with the latter value being lower. This implies that when social self-efficacy was added in the model, the effect of mastery avoidance goal orientation on emotional engagement reduced with increased explanation of variance in the emotional engagement from 2.1%.to 13.3%. The indirect effect (a*b) is significant because the

bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.03, 0.08). Therefore, academic self-efficacy mediates mastery avoidance goal orientation and emotional engagement.

Table A.3.3: The Mediation Effect of Social Self-Efficacy (SSE) on the Relationship between Mastery Avoidance Goal Orientation (MAV) and Cognitive Engagement (CE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SSE	MAV	0.14	5.58	< .01	0.24	0.06	32.29	0.02	0.09	0.19
2	CE	MAV	0.11	3.42	= .0007	0.36	.132	38.33	0.03	0.05	0.17
		SSE	0.40	6.98	< .01				0.06	0.28	0.51
3	CE	MAV	0.17	5.06	<.01	0.22	.050	25.59	0.03	0.10	0.23
4	a*b		0.06							0.03	0.08

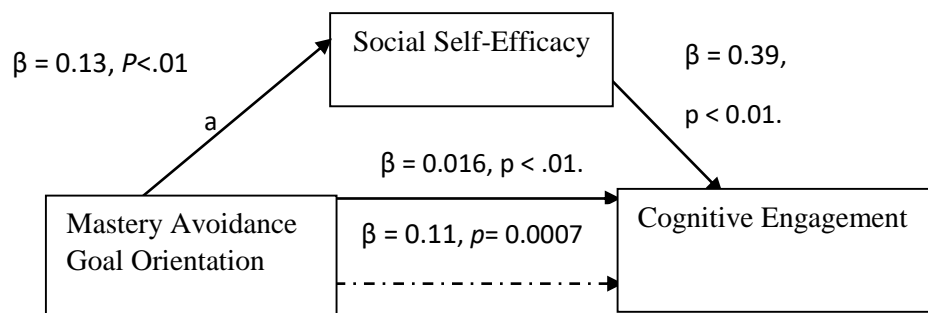


Figure A.3.3: The Mediation Effect of Social Self-Efficacy on the Relationship between Mastery Avoidance Goal Orientation and Cognitive Engagement

The study results in Table A.3.3 and Figure A.3.3 above show the mediation effect of social self-efficacy on the relationship between mastery avoidance goal orientation and cognitive engagement. Model 1 indicates that regressing social self-efficacy on MAV was statistically significant (path a), $\beta = 1.3$, $t = 5.68$ $P < .01$ with $R^2 = 0.059$, which implies that MAV explained 5.9% variance in social self-efficacy. The regression coefficient indicated that MAV significantly predict social self-efficacy. Model 2 shows that results indicate that when social

self-efficacy was introduced in the model, mastery avoidance goal orientation significantly predicted cognitive engagement (Paths c'), $\beta = 0.11$, $t = 1.342$, $P = .0007$ and social self-efficacy significantly predicts cognitive engagement (path, b) $\beta = .39$, $t = 6.97$, $p < .01$ with $R^2 = 0.131$. Model 2 shows the total effect of the MAV on the cognitive engagement when the social self -efficacy is present in the model. The R^2 value indicates that the model explains 13.1 % of the variance in cognitive engagement.

Model 3 was conducted to determine the effect of mastery avoidance goal orientation on cognitive engagement when social self-efficacy is not included in the model. Results indicate that mastery avoidance goal orientation significantly predicts cognitive engagement (path c), $\beta = 0.16$, $t = 5.05$, $p < .01$. The R^2 value indicates that mastery avoidance goal orientation explains 4.8% of the variance in cognitive engagement. The beta coefficients for MAV in paths c and c' are different, with the later value being lower. This implies that when social self-efficacy was added in the model, the effect of mastery avoidance goal orientation on cognitive engagement reduced with an increase in explanation of variance in the cognitive engagement from 4.8% to 13.3%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.03, 0.08). Therefore, social self-efficacy mediates mastery avoidance goal orientation and cognitive engagement.

Table A.3.4: The Mediation Effect of Social Self-Efficacy (SSE) on the Relationship between Mastery Avoidance Goal Orientation (MAV) and Agentic Engagement (AGE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SSE	MAV	0.14	5.58	<.01	0.24	0.06	32.29	0.02	0.09	0.19
2	AGE	MAV	0.01	0.29	= .77	0.34	.11	32.51	0.03	-0.07	0.08
		SSE	0.46	7.74	<.01				0.06	0.34	0.57
3	AGE	MAV	0.07	2.13	<.01	0.09	.006	4.54	0.03	0.006	0.141
4	a*b		0.06							0.04	0.09

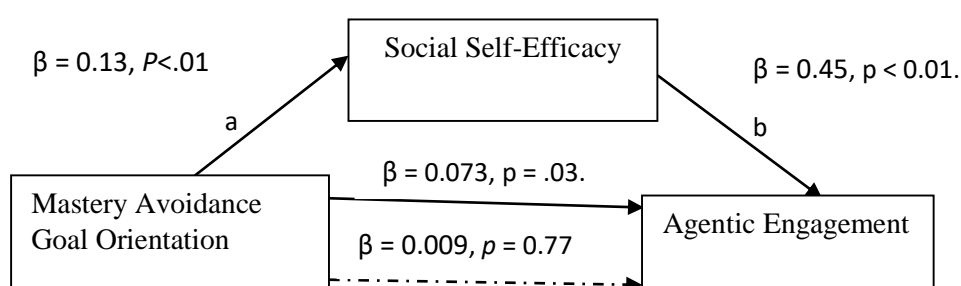


Figure A.3.4: The Mediation Effect of Social Self-Efficacy on the Relationship between Mastery Avoidance Goal Orientation and Agentic Engagement

The study results in Table A.3.4 and Figure A.3.4 show the mediation effect of social self-efficacy on the relationship between mastery avoidance goal orientation and agentic engagement. Model 1 indicates that regressing social self-efficacy on MAV was statistically significant (path a), $\beta = 1.3$, $t = 5.68$ $P < .01$ with $R^2 = 0.059$, which implies that MAV explained 5.9% variance in social self-efficacy. The regression coefficient indicated that MAV significantly predict social self-efficacy. Model 2 shows results of the regression of agentic engagement predicted by both mastery avoidance goal orientation and social self-efficacy.

When social self-efficacy is introduced in the model, mastery avoidance goal orientation does not significantly predict agentic engagement in the model

(Paths c'), $\beta = 0.009$, $t = 0.28$, $P = .77$ while social self-efficacy significantly predicts cognitive engagement, (path b), $\beta = .45$, $t = 7.74$, $p < .01$ with $R^2 = 0.113$. Model 2 shows the total effect of the MAV on the agentic engagement when social self-efficacy is present in the model. The R^2 value indicates that the model explains 11.3 % of the variance in agentic engagement. Model 3 was conducted to determine the effect of mastery avoidance goal orientation on agentic engagement when social self-efficacy is not included in the model. Results indicate that mastery avoidance goal orientation significantly predicts agentic engagement (path c, $\beta = 0.073$, $t = 2.13$, $p = 0.03$). The R^2 value indicates that mastery avoidance goal orientation explains 0.6% of the variance in agentic engagement.

The beta coefficients for MAV in paths c and c' are different, with the latter value being lower. This implies that when social self-efficacy was added in the model, the effect of mastery avoidance goal orientation on agentic engagement reduced with an increase in explanation of variance in agentic engagement from 0.6% to 11.3%. The indirect effect ($a*b$) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.04, 0.09). Therefore, social self-efficacy mediates mastery avoidance goal orientation and agentic engagement.

Table A.3.5: The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Mastery Avoidance Goal Orientation (MAV) and Behavioural Engagement (BE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ESE	MAV	0.18	6.39	<.01	0.27	.075	40.87	0.03	0.13	0.24
2	BE	MAV	0.07	2.39	=.02	0.26	.07	18.47	0.03	0.01	0.12
		ESE	0.20	4.72	<.01				0.04	0.12	0.29
3	BE	MAV	0.11	3.75	=.0002	0.16	.027	14.05	0.03	0.05	0.16
4	a*b		0.04							0.02	0.06

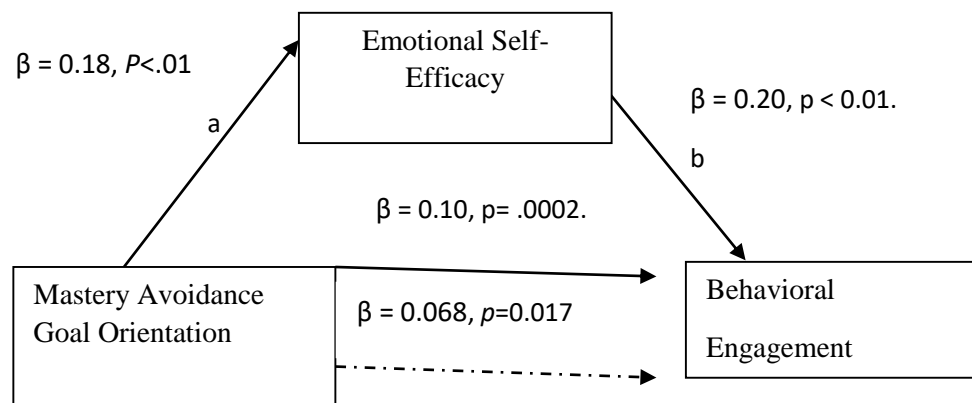


Figure A.3.5: The Mediation Effect of Emotional Self-Efficacy on the Relationship between Mastery Avoidance Goal Orientation and Behavioural Engagement

The study results in Table A.3.5 and Figure A.3.5 show the mediation effect of emotional self-efficacy on the relationship between mastery avoidance goal orientation and agentic engagement. Results in model 1 indicate that regressing emotional self-efficacy on MAV was statistically significant (path a), $\beta = 1.8$, $t = 6.39$ $P < .01$ with $R^2 = 0.074$, which implies that MAV explained 7.4% variance in emotional self-efficacy. The regression coefficient indicated that MAV significantly predict emotional self-efficacy.

Model 2 shows results of the regression of behavioural engagement predicted by both mastery avoidance goal orientation and emotional self-

efficacy. Results indicate that mastery avoidance goal orientation significantly predicts behavioural engagement (Paths c'), $\beta = 0.068$, $t = 2.39$, $P = .017$ while emotional self-efficacy significantly predicts behavioural engagement, (path b) $\beta = .20$, $t = 4.72$, $p < .01$ with $R^2 = 0.067$. Model 2 shows the total effect of the MAV on the behavioural engagement when emotional self-efficacy is present in the model. The R^2 value indicates that the model explains 6.7% of the variance in behavioural engagement.

Model 3 was conducted to determine the effect of mastery avoidance goal orientation on behavioural engagement when emotional self-efficacy is not included in the model. Results indicate that mastery avoidance goal orientation significantly predicts behavioural engagement (path c), $\beta = 0.10$, $t = 3.74$, $p = 0.0002$. The R^2 value indicates that mastery avoidance goal orientation explains 2.6% of the variance in behavioural engagement. The beta coefficients for MAV in paths c and c' are different, with the latter value being lower. This implies that when emotional self-efficacy was added in the model, the effect of mastery avoidance goal orientation on behavioural engagement reduced with an increase in explanation of variance in behavioural engagement from 2.6% to 6.7%. The indirect effect ($a*b$) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.02, 0.06). Therefore, emotional self-efficacy mediates mastery avoidance goal orientation and behavioural engagement.

Table A.3.6: The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Mastery Avoidance Goal Orientation (MAV) and Emotional Engagement (EE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ESE	MAV	0.18	6.39	<. 01	0.27	.075	40.87	0.03	0.13	0.24
2	ESE	MAV	0.04	1.60	= .11	0.28	.081	22.35	0.03	-0.01	0.10
		ESE	0.24	5.81	<. 01				0.04	0.16	0.32
3	EE	MAV	0.09	3.21	= .0014	0.14	.019	10.33	0.03	0.03	0.14
4	a*b		0.04							0.03	0.07

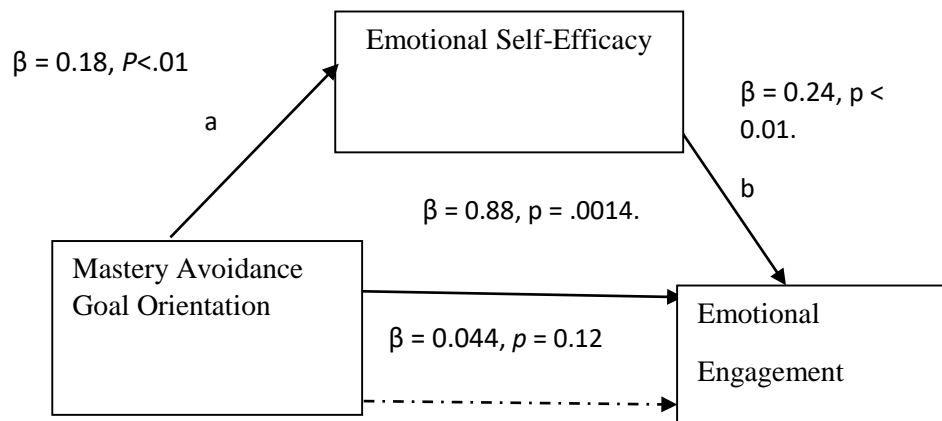


Figure A.3.6: The Mediation Effect of Emotional Self-Efficacy on the Relationship between Mastery Avoidance Goal Orientation and Emotional Engagement

The study results in Table A.3.6, Figure A.3.6 show the mediation effect of emotional self-efficacy on the relationship between mastery avoidance goal orientation and emotional engagement. Model 1 indicates that regressing emotional self-efficacy on MAV was statistically significant (path a), $\beta = 1.8$, $t = 6.39$, $P < .01$ with $R^2 = 0.074$, which implies that MAV explained 7.4% variance in emotional self-efficacy. The regression coefficient indicated that MAV significantly predict emotional self-efficacy. Model 2 shows that when emotional self-efficacy was introduced in the model, mastery avoidance goal

orientation did not significantly predict emotional engagement (Paths c'), $\beta = 0.044$, $t = 1.60$, $P = .12$ while social self-efficacy significantly predicts emotional engagement, (path b), $\beta = .24$, $t = 5.80$, $p < .01$ with $R^2 = 0.081$. Model 2 shows the total effect of the MAV on emotional engagement when emotional self-efficacy is present in the model. The R^2 value indicates that the model explains 8.1% of the variance in behavioural engagement.

Model 3 indicates that when social self-efficacy was not in the model, mastery avoidance goal orientation significantly predicted emotional engagement (path c), $\beta = 0.88$, $t = 3.21$, $p = 0.0014$. The R^2 value indicates that mastery avoidance goal orientation explains 1.9% of the variance in emotional engagement. The beta coefficients for MAV in paths c and c' are different, with the later value being lower. This implies that when social self-efficacy is added in the model, the effect of mastery avoidance goal orientation on emotional engagement reduced with an increase in the explanation of variance in the emotional engagement from 1.9% to 8.1%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.03, 0.07). Therefore, social self-efficacy mediates mastery avoidance goal orientation and emotional engagement.

Table A.3.7: The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Mastery Avoidance Goal Orientation (MAV) and Cognitive Engagement (CCE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ESE	MAV	0.18	6.39	< .01	0.27	.075	40.87	0.03	0.13	0.24
2	CE	MAV	0.11	3.18	= .002	0.36	.132	38.50	0.05	0.04	0.17
		ESE	0.34	7.00	< .01				0.04	0.25	0.44
3	CE	MAV	0.17	5.06	< .01	0.22	.048	25.59	0.03	0.10	0.23
4	a*b		0.06							0.04	0.09

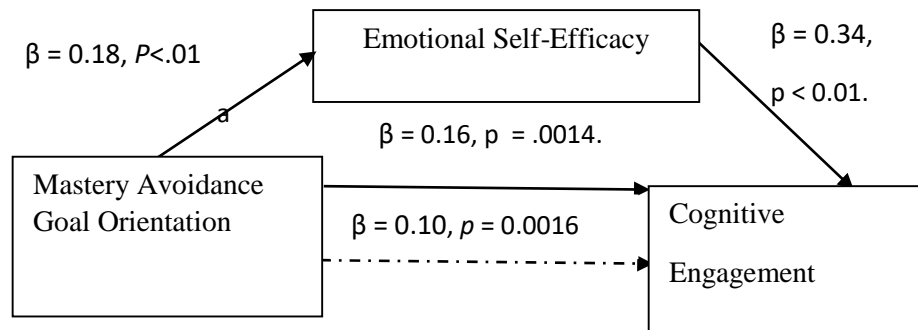


Figure A.3.7: The Mediation Effect of Emotional Self-Efficacy on the Relationship between Mastery Avoidance Goal Orientation and Cognitive Engagement

The study results in Table A.31 and Figure A.31 show the mediation effect of emotional self-efficacy on the relationship between mastery avoidance goal orientation and cognitive engagement. Model 1 indicates that regressing emotional self-efficacy on MAV was statistically significant (path a), $\beta = 1.8$, $t = 6.39$, $P < .01$ with $R^2 = 0.074$, which implies that MAV explained 7.4% variance in emotional self-efficacy. The regression coefficient indicated that MAV significantly predict emotional self-efficacy. Model 2 shows that when emotional self-efficacy was introduced in the model, mastery avoidance goal orientation significantly predicted cognitive engagement (Paths c'), $\beta = 0.10$, $t = 3.18$, $P = .0016$ and emotional self-efficacy significantly predicts cognitive engagement, (path b), $\beta = .34$, $t = 7.00$, $p < .01$ with $R^2 = 0.131$. Model 2 shows

the total effect of the MAV on cognitive engagement when emotional self - efficacy is present in the model. The R^2 value indicates that the model explains 13.1% of the variance in cognitive engagement.

Model 3 indicates that when social self-efficacy is not in the model, mastery avoidance goal orientation significantly predicts cognitive engagement (path c), $\beta = 0.16$, $t = 5.05$, $p < .01$. The R^2 value indicates that mastery avoidance goal orientation explains 4.8% of variance in cognitive engagement. The beta coefficients for MAV in paths c and c' are different, with the latter value being lower. This implies that when social self-efficacy was added in the model, the effect of mastery avoidance goal orientation on cognitive engagement reduced with an increase in the explanation of variance in cognitive engagement from 4.8% to 13.1%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.04, 0.09). Therefore, social self-efficacy mediates mastery avoidance goal orientation and cognitive engagement.

Table A.3.8: The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Mastery Avoidance Goal Orientation (MAV) and Agentic Engagement (AGE)

Model	DV	IV/MV	β	T	P	R	R^2	F	SE	Bootstrap LLCI	ULCI
1	ESE	MAV	0.18	6.39	<.01	0.27	.075	40.87	0.03	0.13	0.24
2	AGE	MAV	0.02	0.51	= .62	0.27	.073	20.06	0.05	-0.05	0.19
		ESE	0.31	5.94	<.01				0.04	0.21	0.41
3	AGE	MAV	0.07	2.13	= .03	0.09	.009	4.54	0.03	0.006	0.141
4	a*b		0.06							0.03	0.08

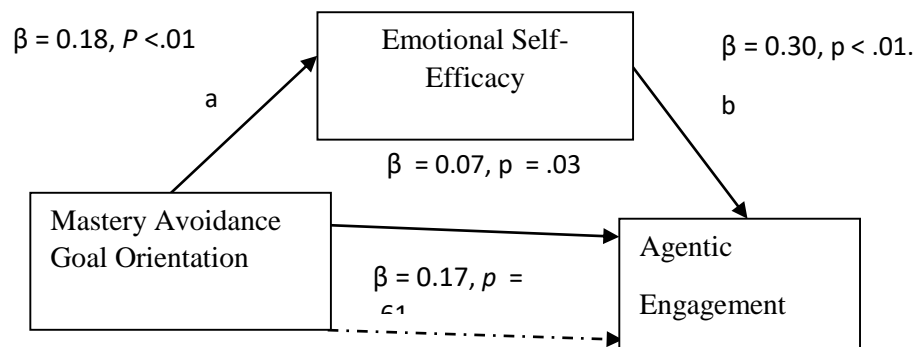


Figure A.3.8: The Mediation Effect of emotional Self-Efficacy on the Relationship between Mastery Avoidance Goal Orientation and Agentic Engagement

The study results in Table A.3.8 and Figure A.3.8 above show the mediation effect of emotional self-efficacy on the relationship between mastery avoidance goal orientation and agentic engagement. Model 1 indicates that regressing emotional self-efficacy on MAV was statistically significant (path a), $\beta = 1.8$, $t = 6.39$, $P < .01$ with $R^2 = 0.074$, which implies that MAV explained 7.4% variance in emotional self-efficacy. The regression coefficient indicated that MAV significantly predict emotional self-efficacy.

Model 2 shows the regression of agentic engagement when emotional self-efficacy is introduced in the model. Results indicate that mastery avoidance goal orientation does not significantly predict agentic engagement in the model (Paths c'), $\beta = 0.17$, $t = .49$, $p = .61$ while emotional self-efficacy significantly predicts agentic (path b), $\beta = .30$, $t = 5.93$, $p < .01$ with $R^2 = 0.073$. Model 2 shows the total effect of the MAV on the agentic engagement when emotional self-efficacy is present in the model. The R^2 value indicates that the model explains 7.3% of variance in agentic engagement.

Model 3 was conducted to determine the effect of mastery avoidance goal orientation on agentic engagement when emotional self-efficacy is not included in the model. When emotional self-efficacy is not in the model,

mastery avoidance goal orientation significantly predicts agentic engagement (path c), $\beta = 0.07$, $t = 2.13$, $p = .03$. The R^2 value indicates that mastery avoidance goal orientation explains 0.8% of the variance in agentic engagement. The beta coefficients for MAV in paths c and c' are different, with the later value being lower. This implies that when emotional self-efficacy was added in the model, the effect of mastery avoidance goal orientation on agentic engagement was no longer significant which implies full mediation. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.03, 0.08). Therefore, emotional self-efficacy mediates mastery avoidance goal orientation and agentic engagement.

Table A.3.9: The Mediation Effect of Academic Self-Efficacy (ASE) on the Relationship between Mastery Avoidance Goal Orientation (MAV) and Behavioural Engagement (BE)

Model	DV	IV/MV	β	T	P	R	R^2	F	SE	Bootstrap LLCI	ULCI
1	ASE	MAV	0.06	2.31	= .02	0.10	.010	5.32	0.03	0.01	0.12
2	BE	MAV	0.07	2.89	= .003	0.51	.261	89.56	0.04	0.03	0.12
		ASE	0.49	12.68	< .01				0.04	0.42	0.57
3	BE	MAV	0.11	3.74	= .0002	0.16	.027	14.05	0.03	0.05	0.16
4	a*b		0.03							0.004	0.062

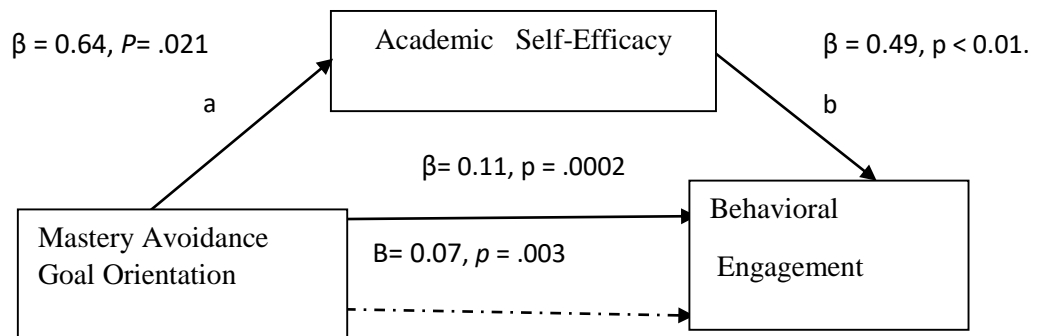


Figure A.3.9: The Mediation Effect of Academic Self-Efficacy on the Relationship between Mastery Avoidance Goal Orientation and Behavioural Engagement

The study results in Table A.3.9 and Figure A.3.9 show the mediation effect of academic self-efficacy on the relationship between mastery avoidance goal orientation and behavioural engagement. Model 1 indicates that regressing academic self-efficacy on MAV was statistically significant (path a), $\beta = .064$, $t = 2.30$ $P = .021$ with $R^2 = 0.010$, which implies that MAV explained 1.0% variance in academic self-efficacy.

The regression coefficient indicated that MAV significantly predict academic self-efficacy. Model 2 shows the results of the regression of behavioural engagement on mastery avoidance goal orientation when academic self-efficacy is introduced in the mode. Results indicate that mastery avoidance goal orientation significantly predicts behavioural engagement (Paths c'), $\beta = 0.11$, $t = 2.97$, $P = .003$, and academic self-efficacy significantly predicts behavioural engagement (path b), $\beta = .49$, $t = 12.68$, $p < .01$ with $R^2 = 0.26$. Model 2 shows the total effect of the MAV on the behavioural engagement when the academic self -efficacy is present in the model. The R^2 value indicates that the model explains 26.1% of the variance in behavioural engagement.

Model 3 indicates that when academic self-efficacy is not in the model, mastery avoidance goal orientation significantly predicts behavioural engagement (path c), $\beta = 0.0710$, $t = 3.75$, $p = .0002$. The R^2 value indicates that mastery avoidance goal orientation explains 26.9% of variance in behavioural engagement. The beta coefficients for MAV in paths c and c' are different, with the latter value being slightly lower. This implies that when social self-efficacy is added in the model, the effect of mastery avoidance goal orientation on agentic engagement decreased with increase in explanation of variance in the behavioural engagement from 26.1% to 26.9%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.00, 0.060). Therefore, academic self-efficacy fully mediates mastery avoidance goal orientation and behavioural engagement.

Table A.3.10: The Mediation Effect of Academic Self-Efficacy (ASE) on the Relationship between Mastery Avoidance Goal Orientation (MAV) and Emotional Engagement (EE)

Model	DV	IV/MV	β	T	P	R	R^2	F	SE	Bootstrap LLCI	ULCI
1	ASE	MAV	0.06	2.31	= .02	0.10	.010	5.32	0.03	0.01	0.12
2	EE	MAV	0.06	2.50	= .012	0.41	.170	50.52	0.03	0.01	0.11
		ASE	0.38	9.43	<.01				0.04	0.30	0.46
3	EE	MAV	0.09	3.21	= .0014	0.14	.019	10.33	0.03	0.03	0.14
4	a*b		0.02							0.003	0.047

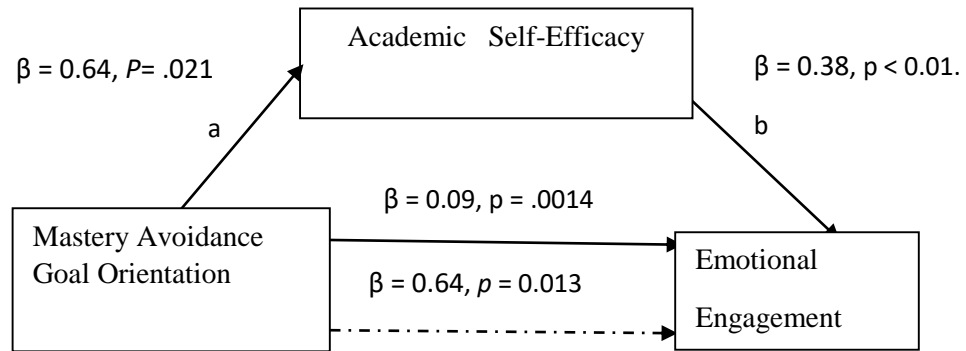


Figure A.3.10: The Mediation Effect of Academic Self-Efficacy on the Relationship between Mastery Avoidance Goal Orientation and Emotional Engagement

The study results in Table A.3.10 and Figure A.3.10 show the mediation effect of academic self-efficacy on the relationship between mastery avoidance goal orientation and emotional engagement. Model 1 indicates that regressing academic self-efficacy on MAV was statistically significant (path a), $\beta = .064$, $t = 2.30$ $P = .021$ with $R^2 = 0.010$, which implies that MAV explained 1.0% variance in academic self-efficacy. The regression coefficient indicated that MAV significantly predict academic self-efficacy.

Model 2 shows that when emotional self-efficacy is introduced in the model, mastery avoidance goal orientation significantly predicts emotional engagement (Paths c'), $\beta = 0.64$, $t = 2.50$, $P = .013$, and academic self-efficacy significantly predicts emotional engagement (path b), $\beta = .38$, $t = 9.42$, $p < 0.01$ with $R^2 = 0.167$. Model 2 shows the total effect of the MAV on the emotional engagement when the academic self -efficacy is present in the model. The R^2 value indicates that the model explains 16.7% of the variance in emotional engagement. Model 3 indicates that when academic self-efficacy was not in the model, mastery avoidance goal orientation significantly predicts emotional engagement (path c), $\beta = 0.088$, $t = 3.21$, $p = .0014$. The R^2 value indicates

that mastery avoidance goal orientation explains 1.9% of the variance in emotional engagement. The beta coefficients for MAV in paths c and c' are different, with the later value being higher. This implies that when academic self-efficacy is added in the model, the effect of mastery avoidance goal orientation on emotional engagement decreased with an increase in explanation of variance in emotional engagement from 1.9% to 16.7%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.003, 0.047). Therefore, academic self-efficacy mediates mastery avoidance goal orientation and emotional engagement.

Table A.3.11: The Mediation Effect of Academic Self-Efficacy (ASE) on the Relationship between Mastery Avoidance Goal Orientation (MAV) and Cognitive Engagement (CE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ASE	MAV	0.06	2.31	= .02	0.10	.010	5.32	0.03	0.01	0.12
2	CE	MAV	0.14	4.48	<.01	0.45	.203	64.44	0.03	0.08	0.19
		ASE	0.47	9.92	<.01				0.05	0.38	0.56
3	CE	MAV	0.17	5.06	<.01	0.22	.048	25.59	0.03	0.10	0.23
4	a*b		0.03							0.004	0.061

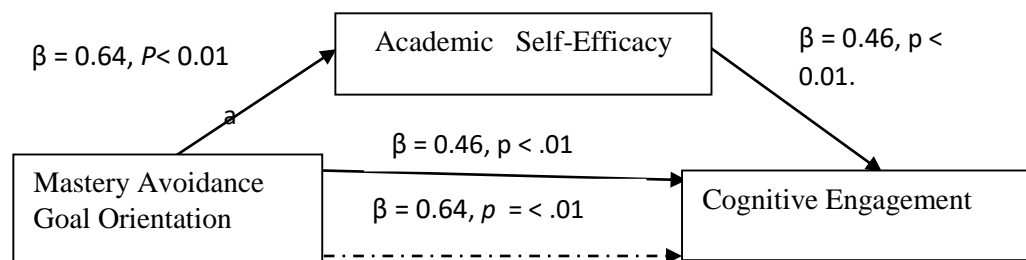


Figure A.3.11: Mediation Effect of Academic Self-Efficacy on the Relationship between Mastery Avoidance Goal Orientation and Cognitive Engagement

The study results in Table A.3.11 Figure A.3.11 shows the mediation effect of academic self-efficacy on the relationship between mastery avoidance goal orientation and cognitive engagement. Model 1 indicate that regressing

academic self-efficacy on MAV was statistically significant (path a), $\beta = .064$, $t = 2.30$ $P = .021$ with $R^2 = 0.010$, which implies that MAV explained 1.0% variance in academic self-efficacy. The regression coefficient indicated that MAV moderately predicts academic self-efficacy. Model 2 shows that when emotional self-efficacy was introduced in the model, mastery avoidance goal orientation significantly predicted cognitive engagement (Paths c'), $\beta = 0.13$, $t = 4.48$, $p < .01$ and academic self-efficacy significantly predicted cognitive engagement (path b), $\beta = .46$, $t = 9.91$, $p < .01$ with $R^2 = 0.203$. Model 2 shows the total effect of the MAV on the cognitive engagement when the academic self-efficacy is present in the model. The R^2 value indicates that the model explains 20.3% variance in cognitive engagement.

Model 3 indicates that when academic self-efficacy is not in the model, mastery avoidance goal orientation significantly predicts cognitive engagement (path c), $\beta = 0.16$, $t = 5.06$, $p < .01$. The R^2 value indicates that mastery avoidance goal orientation explains 4.8% of variance in cognitive engagement. The beta coefficients for MAV in paths c and c' are different, with the later value being higher. This implies that when social self-efficacy was added in the model, the effect of mastery avoidance goal orientation on cognitive engagement decreased with an increase in explanation of variance in the cognitive engagement from 4.8% to 20.3%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.004, 0.061). Therefore, academic self-efficacy mediates mastery avoidance goal orientation and cognitive engagement.

Table A3.12: The Mediation Effect of Academic Self-Efficacy (ASE) on the Relationship between Mastery Avoidance Goal Orientation (MAV) and Agentic Engagement (AGE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ASE	MAV	0.06	2.31	= .02	0.10	.010	5.32	0.03	0.01	0.12
2	AGE	MAV	0.04	1.19	= .23	0.47	.222	72.13	0.03	-0.02	0.097
		ASE	0.57	11.77	<.01				0.05	0.47	0.662
3	AGE	MAV	0.07	2.13	= .03	0.09	.009	4.54	0.03	0.006	0.141
4	a*b		0.04							0.005	0.071

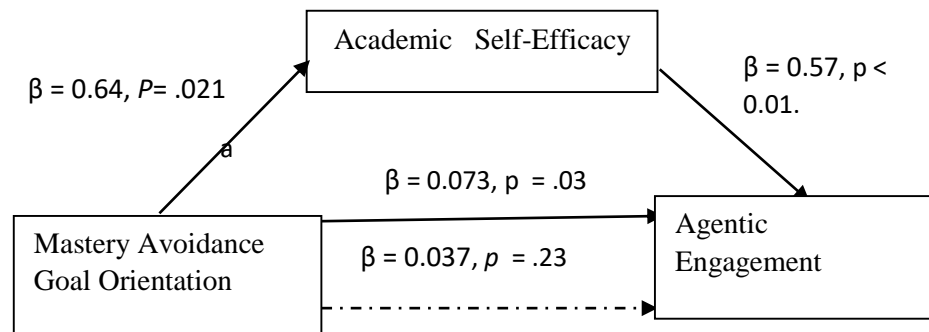


Figure A.3.12: The Mediation Effect of Academic Self-Efficacy on the Relationship between Mastery Avoidance Goal Orientation and Agentic Engagement

The study results in Table A.3.12 and Figure A.3.12 show the mediation effect of academic self-efficacy on the relationship between mastery avoidance goal orientation and agentic engagement. Model 1 was conducted to determine the regression effect of academic self-efficacy on the relationship between mastery avoidance goal orientation and agentic engagement among adolescent students in secondary schools in Kabale district, Southwestern Uganda. Path a of regressing academic self-efficacy on MAV was statistically significant (path a), $\beta = .064$, $t = 2.30$, $P = .021$ with $R^2 = 0.010$, which implies that MAV explained 1.0% variance in academic self-efficacy. The regression coefficient indicated that MAV significantly predict academic self-efficacy.

Model 2 shows results of the regression of agentic engagement predicted by both mastery avoidance goal orientation and academic self-efficacy. While mastery avoidance goal orientation does not significantly predict agentic engagement in the model (Paths c'), $\beta = 0.037$, $t = 1.19$, $p = .23$ academic self-efficacy does significantly predict agentic engagement (path b), $\beta = .57$, $t = 11.77$, $p < .01$ with $R^2 = 0.221$. Model 2 shows the total effect of the MAV on the agentic engagement when the academic self-efficacy is present in the model. The R^2 value indicates that the model explains 22.1% of the variance in agentic engagement.

Model 3 was conducted to determine the effect of mastery avoidance goal orientation on agentic engagement when academic self-efficacy is not included in the model. Results indicate that mastery avoidance goal orientation significantly predicted agentic engagement (path c), $\beta = 0.73$, $t = 2.13$, $p = .03$. The R^2 value indicates that mastery avoidance goal orientation explains 0.8% of variance in agentic engagement. The beta coefficients for MAV in paths c and c' are different, with the latter value being lower. This implies that when social self-efficacy is included in the model, the effect of mastery avoidance goal orientation on agentic engagement increased with an increase in explanation of variance in agentic engagement from 0.8% to 22.1%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI of (0.00, 0.071). Therefore, academic self-efficacy fully mediates mastery avoidance goal orientation and agentic engagement. This implies that intervention to enhance academic engagement among adolescent students whose achievement goal orientation is mastery avoidance must focus on academic self-efficacy enhancement.

Appendix A.4: The Mediation Effect of Self-Efficacy Sub-constructs on the Relationship between Performance Avoidance Goal Orientation and Academic Engagement Sub-constructs

The mediation effect of self-efficacy sub-constructs on the relationship between performance avoidance goal orientation and academic engagement sub-constructs will include 12 models;

- PAV → SSE → BE, PAV → SSE → EE,
 PAV → SSE → CE, PAV → SSE → AE;
 PAV → ESE → BE, PAV → ESE → EE,
 PAV → ESE → CE, PAV → ESE → AE;
 PAV → ASE → BE, PAV → ASE → EE,
 PAV → ASE → CE, PAV → ASE → AE.

Table A.4.1: The Mediation Effect of Social Self-Efficacy (SSE) on the Relationship between Performance Avoidance Goal Orientation (PAV) and Behavioural Engagement (BE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SSE	PAV	0.19	6.44	<. 01	0.27	.075	41.45	0.03	0.13	0.25
2	BE	PAV	0.10	3.02	= .003	0.39	.15	45.26	0.03	0.04	0.16
		SSE	0.38	7.84	<. 01				0.05	0.28	0.47
3	BE	PAV	0.17	5.09	<.01	0.22	.049	25.92	0.03	0.11	0.24
4	a*b		0.07							0.04	0.10

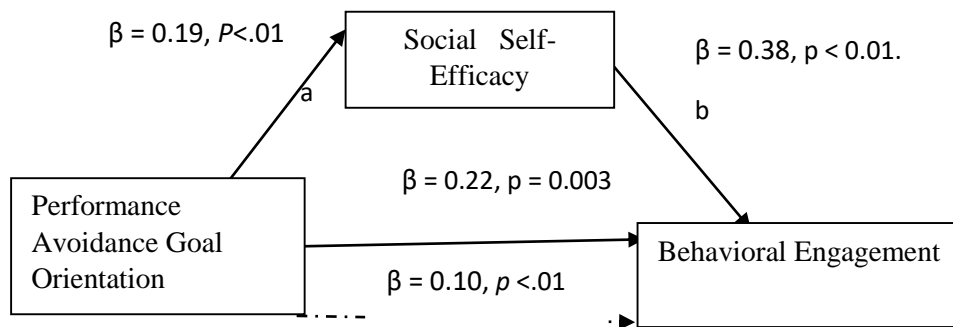


Figure A.4.1: The Mediation Effect of Social Self-Efficacy on the Relationship between Performance Avoidance Goal Orientation and Behavioural Engagement

The study results in Table A.4.1 and Figure A.4.1 show the mediation effect of social self-efficacy on the relationship between performance avoidance goal orientation and behavioural engagement. Model 1 indicates that regressing social self-efficacy on PAV was statistically significant (path a), $\beta = .19$, $t = 6.4$, $P < .01$ with $R^2 = 0.075$, which implies that PAV explained 7.5% variance in academic self-efficacy. The regression coefficient indicated that PAV significantly predict social self-efficacy. Model 2 shows the results of the regression of behavioural engagement predicted by both PAV and SSE. When SSE was introduced to the model, PAV significantly predicted behavioural engagement (Paths c'), $\beta = 0.10$, $t = 3.02$, $p = 0.003$ and SSE also significantly predicted behavioural engagement (path b), $\beta = .38$, $t = 7.8$, $p < .01$ with $R^2 = 0.15$. The R^2 value indicates that the model explains 15.0% of the variance in behavioural engagement.

Model 3 was conducted to determine the effect of PAV goal orientation on behavioural engagement when SSE was not included in the model. Results indicate that PAV goal orientation significantly predicted behavioural engagement (path c), $\beta = 0.99$, $t = 3.20$, $p = 0.003$.

The R^2 value indicates that performance avoidance goal orientation explains 7.5% of the variance in behavioural engagement. The beta coefficients for PAV in paths c and c' are different, with the latter value being lower. This implies that when SSE was added in the model, the effect of PAV goal orientation on behavioural engagement increased with increase in explanation of variance in behavioural engagement from 7.5% to 15.0%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.043, 0.103). Therefore, SSE partially mediates PAV goal orientation and behavioural engagement.

Table A.4.2: The Mediation Effect of Social Self-Efficacy (SSE) on the Relationship between Performance Avoidance Goal Orientation (PAV) and Emotional Engagement (EE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SSE	PAV	0.19	6.44	<.01	0.27	.075	41.45	0.03	0.13	0.25
2	EE	PAV	0.11	2.99	=.003	0.38	.15	43.30	0.03	0.03	0.16
		SSE	0.36	7.65	<.01				0.05	0.27	0.45
3	EE	PAV	0.17	5.03	<.01	0.22	.049	25.27	0.03	0.10	0.23
4	a*b		0.07							0.04	0.11

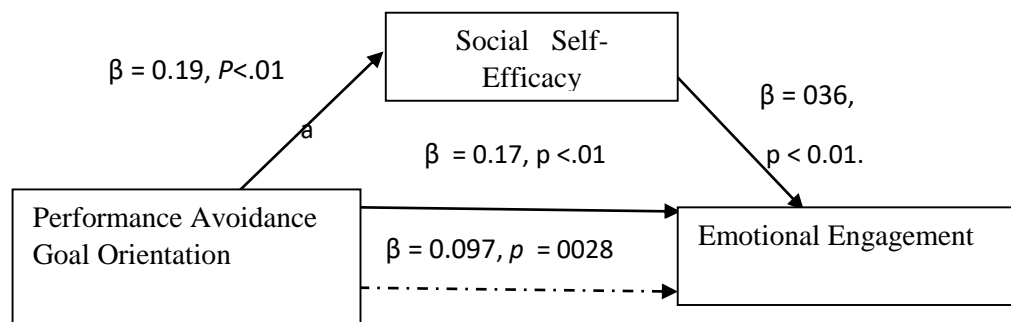


Figure A.4.2: The Mediation Effect of Social Self-Efficacy on the Relationship between Performance Avoidance Goal Orientation and Emotional Engagement

The study results in Table A.4.2 Figure A.4.2 present the mediation effect of social self-efficacy (SSE) on the relationship between PAV goal orientation and emotional engagement. Model 1 indicates that regressing social self-efficacy on

PAV was statistically significant (path a), $\beta = .19$, $t = 6.43$, $P < .01$ with $R^2 = 0.075$, which implies that PAV explained 7.5% variance in SSE. The regression coefficient indicated that PAV significantly predict SSE. Model 2 shows the total effect of the PAV on the emotional engagement when the SSE is added in the model. Results indicate that PAV significantly predicts emotional engagement (Paths c'), $\beta = .097$, $t = 2.99$, $p = .0028$ and SSE significantly predicts emotional engagement (path b), $\beta = .036$, $t = 7.64$, $p < .01$ with $R^2 = 0.146$. The R^2 value indicates that the model explains 14.6% of the variance in emotional engagement.

Model 3 was conducted to determine the effect of PAV goal orientation on emotional engagement when SSE is not included in the model. Results indicate that PAV goal orientation significantly predicts emotional engagement (path c), $\beta = 0.17$, $t = 5.02$, $p < .01$. The R^2 value indicates that PAV goal orientation explains 4.7% of the variance in emotional engagement. The beta coefficients for PAV in paths c and c' are different, with the latter value being lower. This implies that when SSE was added in the model, the effect of PAV goal orientation on emotional engagement increased with an increase in explanation of variance in emotional engagement from 4.7 % to 14.6%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.04, 0.11). Therefore, SSE partially mediates PAV goal orientation and emotional engagement.

Table A.4.3: The Mediation Effect of Social Self-Efficacy (SSE) on the Relationship between Performance Avoidance Goal Orientation (PAV) and Cognitive Engagement (CE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	SSE	PAV	0.19	6.44	< .01	0.27	.075	41.45	0.03	0.13	0.25
2	CE	PAV	0.04	1.09	= .28	0.34	.12	33.13	0.04	-0.04	0.12
		SSE	0.44	7.46	< .01	0.06	0.33				
3	CE	MAV	0.13	3.01	<.002	0.14	.019	10.29	0.03	0.05	0.21
4	a*b		0.08							0.05	0.13

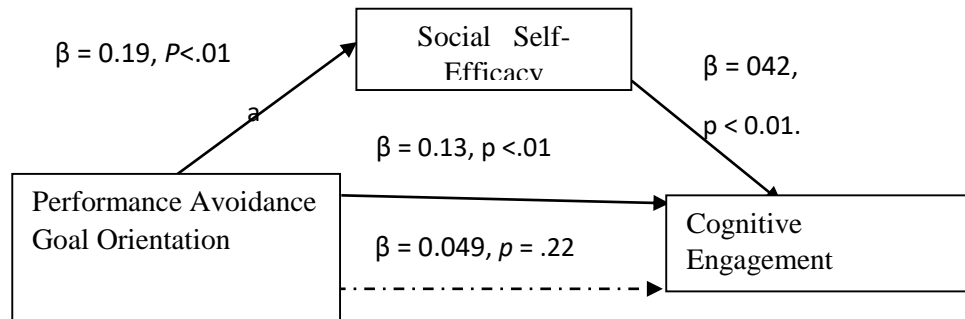


Figure A.4.3: The Mediation Effect of Social Self-Efficacy on the Relationship between Performance Avoidance Goal Orientation and Cognitive Engagement

The study results in Figure A.4.3 and Table A.4.3 presents the mediation effect of SSE on the relationship between PAV goal orientation and cognitive engagement. Model 1 indicate that regressing social self-efficacy on PAV was statistically significant (path a), $\beta = .19$, $t = 6.43$, $P < .01$ with $R^2 = 0.075$, which implies that PAV explained 7.5% variance in SSE. The regression coefficient indicated that PAV significantly predict SSE. Model 2 shows the total effect of the PAV on the cognitive engagement when the SSE is added in the model. When SSE is introduced to the model, PAV does not significantly predict cognitive engagement (Paths c'), $\beta = 0.049$, $t = 1.22$, $p = .22$ while SSE significantly predicts cognitive engagement (path b), $\beta = .042$, $t = 7.33$, $p < .01$ with $R^2 = 0.$

113. The R^2 value indicates that the model explains 11.3% of the variance in cognitive engagement.

Model 3 was conducted to determine the effect of PAV goal orientation on cognitive engagement when SSE is not included in the model. Results indicate that PAV goal orientation significantly predicts cognitive engagement (path c), $\beta = 0.13$, $t = 3.02$, $p < .01$. The R^2 value indicates that PAV goal orientation explains 2% of the variance in cognitive engagement. The beta coefficients for PAV in path c and c' are different, with the latter value being lower. This implies that when SSE was added in the model, the effect of PAV goal orientation on cognitive engagement increased with an increase in explanation of variance in cognitive engagement from 2% to 11.3%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.05, 0.13). Therefore, there is a full mediation effect of SSE on PAV goal orientation and cognitive engagement.

Table A.4.4: The Mediation Effect of Social Self-Efficacy (SSE) on the Relationship between Performance Avoidance Goal Orientation (PAV) and Agentic Engagement (AE)

Model	DV	IV/MV	β	T	P	R	R^2	F	SE	Bootstrap LLCI	ULCI
1	SSE	PAV	0.19	6.44	<.01	0.27	.075	41.45	0.03	0.13	0.25
2	AE	PAV	0.04	1.09	= .28	0.34	.12	33.13	0.04	-0.04	0.12
		SSE	0.44	7.46	<.01				0.06	0.33	0.56
3	AGE	PAV	0.13	3.01	<.002	0.14	.019	10.29	0.03	0.05	0.21
4	a*b		0.08							0.05	0.13

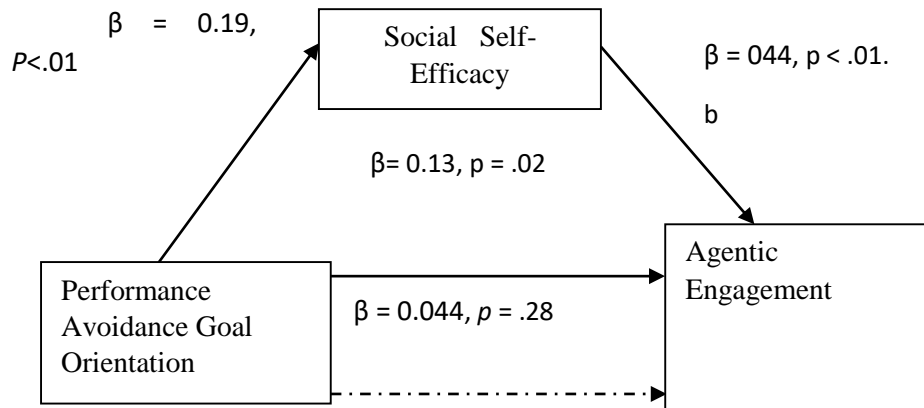


Figure A.4.4: The Mediation Effect of Social Self-Efficacy on the Relation between Performance Goal Orientation and Agentic Engagement

The study results in Table A.4.4 and Figure A.4.4 above shows the mediation effect of SSE on the relationship between PAV goal orientation and agentic engagement. Model 1 indicates that regressing social self-efficacy on PAV was statistically significant (path a), $\beta = .19$, $t = 6.43$, $P < .01$ with $R^2 = 0.075$, which implies that PAV explained 7.5% variance in SSE. The regression coefficient indicates that PAV significantly predicts SSE. Model 2 shows the total effect of the PAV on the agentic engagement when the SSE is added in the model. When social self-efficacy (SSE) is introduced to the model, PAV does not significantly predict agentic engagement in the model (Paths c'), $\beta = 0.044$, $t = 1.08$, $p = .28$ but SSE significantly predicts agentic engagement (path b), $\beta = .044$, $t = 7.46$, $p < .01$ with $R^2 = 0.116$. The R^2 value indicates that the model explains 11.6% of the variance in agentic engagement.

Model 3 was conducted to determine the effect of PAV goal orientation on agentic engagement when SSE is not included in the model. Results indicate that PAV goal orientation significantly predicts agentic engagement (path c), $\beta = 0.13$, $t = 3.09$, $p = .02$. The R^2 value indicates that PAV goal orientation explains 2% of variance in agentic engagement. The beta coefficients for PAV

in path c and c' are different, with the latter value being lower. This implies that when SSE was added in the model, the effect of PAV goal orientation on agentic engagement increased with an increase in explanation of variance in agentic engagement 2% to 11.3%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.052, 0.120). Therefore, SSE fully mediates performance avoidance goal orientation (PAV) and agentic engagement.

Table A.4.5: The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Performance Avoidance Goal orientation (PAV) and Behavioural Engagement (BE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ESE	PAV	0.15	4.40	<.01	0.19	.040	19.32	0.04	0.09	0.22
2	BE	PAV	0.14	4.19	<.01	0.31	.010	24.81	0.04	0.07	0.20
		ESE	0.21	4.74	<.01				0.04	0.12	0.27
3	BE	PAV	0.17	5.09	<.002	0.22	.05	25.92	0.03	0.11	0.24
4	a*b		0.03							0.01	0.05

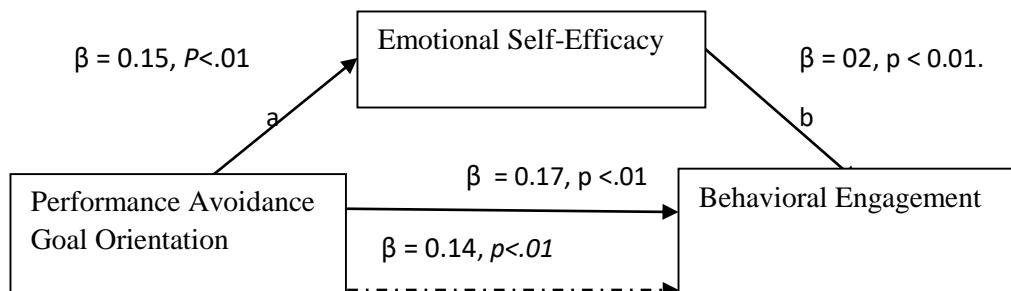


Figure A.4.5: The Mediation Effect of Emotional Self-Efficacy on the Relationship between Performance Avoidance Goal Orientation and Behavioural Engagement

The study results in Table A.4.5 and Figure A.4.5 show the mediation effect of ESE on the relationship between PAV goal orientation and behavioural engagement. Model 1 indicates that regressing social self-efficacy on PAV was statistically significant (path a), $\beta = .15$, $t = 4.39$, $P < .01$ with $R^2 = 0.037$, which

implies that PAV explained 3.7% variance in ESE. The regression coefficient indicated that PAV significantly predict ESE. Model 2 shows the total effect of the PAV on the behavioural engagement when the ESE is added in the model. Results indicate that PAV significantly predict behavioural engagement (Paths c'), $\beta = 0.14$, $t = 4.19$, $p < .01$ and ESE significantly predicts behavioural engagement (path b), $\beta = .02$, $t = 4.74$, $p < .01$ with $R^2 = 0.089$. The R^2 value indicates that the model explains 8.9% of the variance in behavioural engagement.

Model 3 was conducted to determine the effect of PAV goal orientation on behavioural engagement when ESE is not included in the model. Results indicate that PAV goal orientation significantly predicts behavioural engagement (path c), $\beta = 0.17$, $t = 5.09$, $p < .01$. The R^2 value indicates that PAV goal orientation explains 4.9% of the variance in behavioural engagement. The beta coefficients for PAV in path c and c' are different, with the latter value being lower. This implies that when ESE was added in the model, the effect of PAV goal orientation on behavioural engagement increased with an increase in explanation of variance in behavioural engagement 4.9% to 8.9%. The indirect effect ($a*b$) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.01, 0.05). Therefore, ESE partially mediates PAV goal orientation and behavioural engagement.

Table A.4.6: The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Performance Avoidance Goal Orientation (PAV) and Emotional Engagement (EE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ESE	PAV	0.15	4.40	<.01	0.19	.040	19.32	0.04	0.09	0.22
2	ESE	PAV	0.13	3.99	<.0001	0.32	.100	29.59	0.03	0.07	0.19
		ESE	0.23	5.69	<.01				0.04	0.16	0.31
3	EE	PAV	0.17	5.03	<.002	0.22	.05	25.27	0.03	0.10	0.23
4	a*b		0.04							0.02	0.06

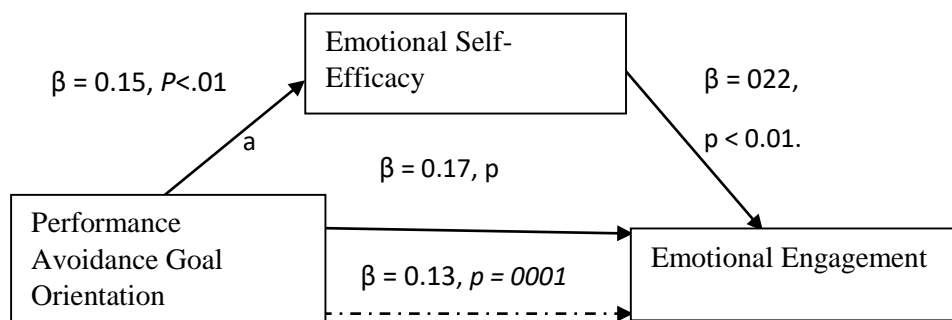


Figure A. 4.6: The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Performance Avoidance Goal Orientation (PAV) and Emotional Engagement (EE)

The study results in Table A.4.6 and Figure A.4.6 shows the mediation effect of ESE on the relationship between PAV goal orientation and emotional engagement. Model 1 indicates that regressing emotional self-efficacy on PAV was statistically significant (path a), $\beta = .15$, $t = 4.39$, $P < .01$ with $R^2 = 0.037$, which implies that PAV explained 3.7% variance in ESE. The regression coefficient indicated that PAV significantly predict ESE. Model 2 shows the total effect of the PAV on the emotional engagement when the ESE is added in the model. Results indicate that PAV significantly predicts emotional engagement (Paths c'), $\beta = 0.13$, $t = 3.99$, $p = .0001$ and ESE significantly predicts emotional engagement (path b), $\beta = 0.22$, $t = 5.69$, $p < .01$ with $R^2 = 0.105$. The R^2 value indicates that the model explains 10.5% of the variance in emotional engagement.

Model 3 was conducted to determine the effect of PAV goal orientation on emotional engagement when ESE is not included in the model. Results indicate that PAV goal orientation significantly predicts emotional engagement (path c), $\beta = 0.17$, $t = 5.03$, $p < .01$. The R^2 value indicates that PAV goal orientation explains 4.7% of the variance in emotional engagement. The beta coefficients for PAV in path c and c' are different, with the latter value being lower. This implies that when ESE was added in the model, the effect of PAV goal orientation on emotional engagement increased with an increase in explanation of variance in emotional engagement from 4.7% to 10.5%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.02, 0.06). Therefore, ESE partially mediates PAV goal orientation and emotional engagement.

Table A.4.7: The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Performance Avoidance Goal Orientation (PAV) and Cognitive Engagement (CE)

Model	DV	IV/MV	β	T	P	R	R^2	F	SE	Bootstrap LLCI	ULCI
1	ESE	PAV	0.15	4.40	<.01	0.19	.040	19.32	0.04	0.09	0.22
2	CE	PAV	0.07	1.86	= .06	0.35	.12	34.75	0.04	-.004	0.150
		ESE	0.37	7.62	<.01				0.05	.271	0.460
3	CE	PAV	0.13	3.21	= .001	0.14	.020	10.29	0.04	0.10	0.23
4	a*b		0.04							0.05	0.21

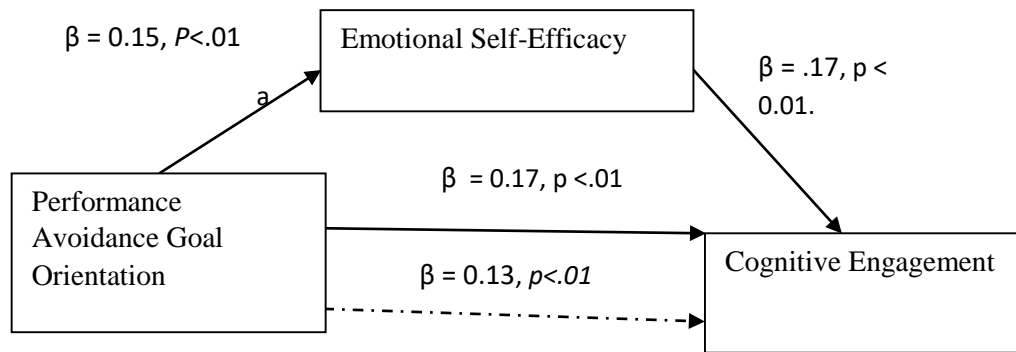


Figure A.4.7: The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Performance Avoidance Goal Orientation (PAV) and Cognitive Engagement (CE)

The study results in Table A.4.7 and Figure A.4.7 shows the mediation effect of ESE on the relationship between PAV goal orientation and cognitive engagement. Model 1 indicates that regressing emotional self-efficacy on PAV was statistically significant (path a), $\beta = .15$, $t = 4.39$, $P < .01$ with $R^2 = 0.037$, which implies that PAV explained 3.7% variance in ESE. The regression coefficient indicated that PAV significantly predicts ESE. Model 2 shows the total effect of the PAV on the cognitive engagement when the ESE is added in the model. Results indicate that PAV significantly predicts cognitive engagement (Paths c'), $\beta = 0.14$, $t = 1.86$, $p < .01$ and ESE significantly predicts cognitive engagement (path b), $\beta = .17$, $t = 7.61$, $p < .01$ with $R^2 = 0.120$. The R^2 value indicates that the model explains 12.0% of variance in cognitive engagement.

Model 3 was conducted to determine the effect of PAV goal orientation on cognitive engagement when ESE is not included in the model. Results indicate that PAV goal orientation significantly predicts cognitive engagement (path c), $\beta = 0.13$, $t = 3.20$, $p < .01$. The R^2 value indicates that PAV goal orientation explains 2% of variance in cognitive engagement.

The beta coefficients for PAV in path c and c' are different, with the latter value being lower. This implies that when ESE was added in the model, the effect of PAV goal orientation on cognitive engagement was not significant. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.05, 0.23). Therefore, ESE partially mediates PAV goal orientation and cognitive engagement.

Table A.4.8: The Mediation Effect of Emotional Self-Efficacy (ESE) on the Relationship between Performance Avoidance Goal Orientation (PAV) and Agentic Engagement (AGE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ESE	PAV	0.15	4.40	< .01	0.19	.040	19.32	0.04	0.09	0.22
2	AGE	PAV	0.08	2.02	= .04	0.28	.08	22.14	0.04	.002	0.163
		ESE	0.30	5.82	< .01						
3	AGE	PAV	0.13	3.21	= .002	0.14	.020	9.61	0.04	0.05	0.21
4	a*b		0.05							0.02	0.07

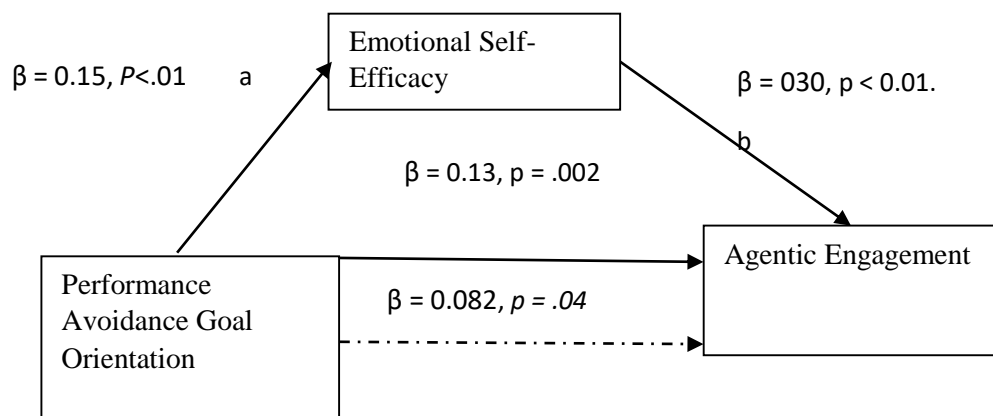


Figure A.4.8: The Mediation Effect of Emotional Self-Efficacy on the Relationship between Performance Avoidance Goal Orientation and Agentic Engagement

Results in Table A.4.8 and Figure A.4.8 indicates the mediation effect of emotional self-efficacy on the relationship between PAV goal orientation and agentic engagement. Model 1 indicates that regressing emotional self-efficacy on PAV was statistically significant (path a), $\beta = .15$, $t = 4.39$, $P < .01$ with R^2

= 0.037, which implies that PAV explained 3.7% variance in ESE. The regression coefficient indicated that PAV significantly predict ESE. Model 2 shows the total effect of the PAV on the agentic engagement when the ESE is added in the model. When ESE is introduced to the model, PAV significantly predict agentic engagement (Paths c'), $\beta = 0.082$, $t = 2.02$, $p = .04$ and ESE significantly predicts agentic engagement (path b), $\beta = .030$, $t = 5.83$, $p < .01$ with $R^2 = 0.080$. The R^2 value indicates that the model explains 8.0% of the variance in behavioural engagement.

Model 3 was conducted to determine the effect of PAV goal orientation on agentic engagement when ESE is not included in the model. Results indicate that PAV goal orientation significantly predicts agentic engagement (path c), $\beta = 0.13$, $t = 3.09$, $p = .002$. The R^2 value indicates that PAV goal orientation explains 1.9% of variance in agentic engagement. The beta coefficients for PAV in path c and c' are different, with the latter value being lower. This implies that when ESE was added in the model, the effect of PAV goal orientation on agentic engagement was significant and increased with increase in explanation of variance in agent engagement from 1.6% to 8.0%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.02, 0.07). Therefore, ESE mediates PAV goal orientation and agentic engagement.

Table A.4.9: The Mediation Effect of Academic Self-Efficacy (ASE) on the Relationship between Performance Avoidance Goal Orientation (PAV) and Behavioural Engagement (BE)

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ASE	PAV	0.15	4.56	< .01	0.20	.039	20.76	0.03	0.09	0.22
2	BE	PAV	0.21	2.26	= .0012	0.51	.263	90.79	0.03	.041	0.157
		ASE	0.48	12.17	< .01				0.04	.400	0.555
3	BE	PAV	0.17	5.09	<.01	0.22	.049	9.61	0.03	0.11	0.24
4	a*b		0.07							0.05	0.14

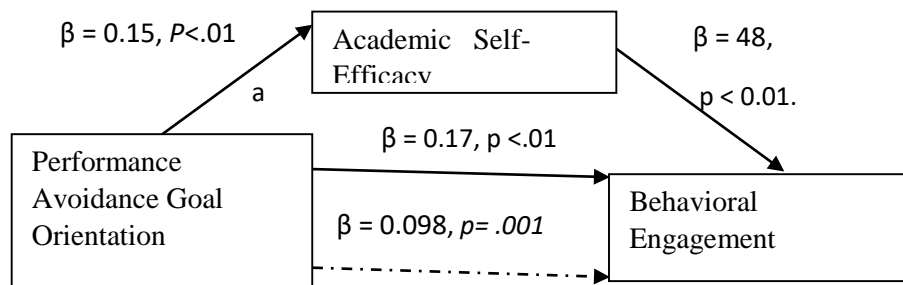


Figure A.4.9: The Mediation Effect of Academic Self-Efficacy on the Relationship between Performance Avoidance Goal Orientation and Behavioural Engagement

The study results in Table A.4.9 and Figure A.4.9 indicates that the mediation effect of ASE on the relationship between PAV goal orientation and behavioural engagement. Model 1 indicates that regressing ASE on PAV was statistically significant (path a), $\beta = .15$, $t = 4.55$, $P < .01$ with $R^2 = 0.039$, which implies that PAV explained 3.9% variance in ASE. The regression coefficient indicated that PAV significantly predicts ASE. Model 2 shows the total effect of the PAV on the behavioural engagement when the ASE is added in the model.

Results indicate that PAV significantly predicts behavioural engagement (Paths c'), $\beta = 0.098$, $t = 3.25$, $p = .001$ and ASE significantly predicts behavioural engagement (path b), $\beta = .048$, $t = 12.17$, $p < .01$ with $R^2 =$

0.264. The R^2 value indicates that the model explains 26.4% of variance in behavioural engagement.

Model 3 was conducted to determine the effect of PAV goal orientation on behavioural engagement when ASE is not included in the model. Results indicate that PAV goal orientation significantly predicts behavioural engagement (path c), $\beta = 0.17$, $t = 5.09$, $p < .01$. The R^2 value indicates that PAV goal orientation explains 4.9% of variance in behavioural engagement. The beta coefficients for PAV in path c and c' are different, with the latter value being lower. This implies that when ASE was added in the model, the effect of PAV goal orientation on behavioural engagement increased with increase in explanation of variance from 4.9% to 26.4%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.038, 0.11). Therefore, ASE partially mediates PAV goal orientation and behavioural engagement.

Table A.4.10: The Mediation Effect of Academic Self-Efficacy on the Relationship between Performance Avoidance Goal Orientation and Emotional Engagement

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ASE	PAV	0.15	4.56	<.01	0.20	.039	20.76	0.03	0.09	0.22
2	EE	PAV	0.11	3.53	=.0005	0.42	.18	54.17	0.03	0.05	0.17
		ASE	0.36	8.80	<.01				0.04	0.28	0.44
3	EE	PAV	0.17	5.03	<.01	0.22	.050	25.27	0.03	0.10	0.23
4	a*b		0.06							0.03	0.08

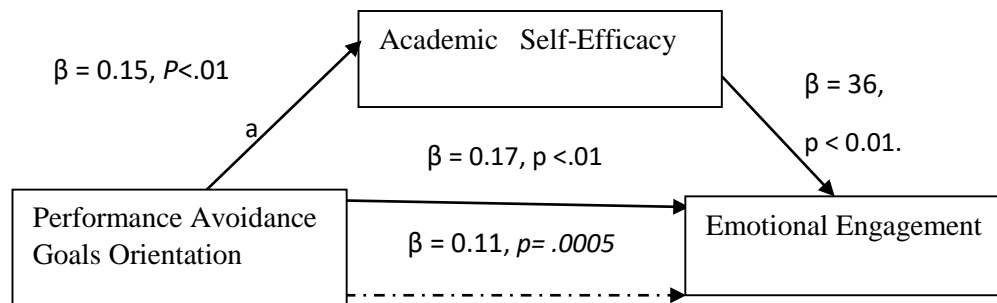


Figure A.4.10: The Mediation Effect of Academic Self-Efficacy on the Relationship between Performance Avoidance Goal Orientation and Emotional Engagement

The study results in Table A.4.10 and Figure A.4.10 shows the mediation effect of ASE on the relationship between PAV goal orientation and emotional engagement. Model 1 indicates that regressing ASE on PAV was statistically significant (path a), $\beta = .15$, $t = 4.55$, $P < .01$ with $R^2 = 0.039$, which implies that PAV explained 3.9% variance in ASE. The regression coefficient indicated that PAV significantly predicts ASE. Model 2 shows the total effect of the PAV on the emotional engagement when the ASE is added in the model. Results indicate that PAV significantly predicts emotional engagement in the model (Paths c'), $\beta = 0.11$, $t = 3.52$, $p = .0005$ and ASE significantly predicts emotional engagement (path b), $\beta = .036$, $t = 8.89$, $p < .01$ with $R^2 = 0.180$. The R^2 value

indicates that the model explains 18.0% of the variance in emotional engagement.

Model 3 was conducted to determine the effect of PAV goal orientation on emotional engagement when ASE is not included in the model. Results indicate that PAV goal orientation significantly predicts emotional engagement (path c), $\beta = 0.17$, $t = 5.03$, $p < .01$. The R^2 value indicates that PAV goal orientation explains 4.7% of the variance in emotional engagement. The beta coefficients for PAV in path c and c' are different, with the latter value being lower. This implies that when ASE was added in the model, the effect of PAV goal orientation on emotional engagement increased with increase in explanation of variance in emotional engagement from 4.7% to 18.0%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.03, 0.09). Therefore, ASE mediates PAV goal orientation and emotional engagement.

Table A.4.11: The Mediation Effect of Academic Self-Efficacy (ASE) on the Relationship between Performance Avoidance Goal Orientation (PAV) and Cognitive Engagement (CE)

Model	DV	IV/MV	β	T	P	R	R^2	F	SE	Bootstrap LLCI	ULCI
1	ASE	PAV	0.15	4.56	< .01	0.20	.039	20.76	0.03	0.09	0.22
2	CE	PAV	0.06	1.49	= .14	0.42	.17	53.66	0.04	-0.02	0.13
		ASE	0.48	9.75	< .01						
3	CE	PAV	0.13	3.21	= .0014	0.14	.020	10.29	0.04	0.10	0.23
4	a*b		0.06							0.05	0.21

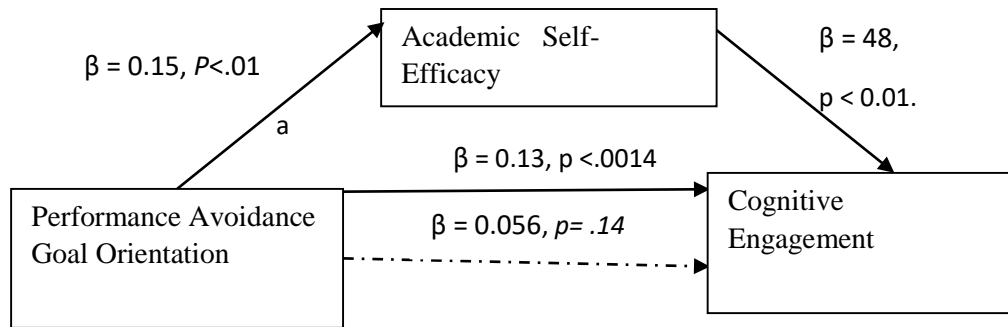


Figure A.4.11: The Mediation Effect of Academic Self-Efficacy on the Relationship between Performance Avoidance Goal Orientation and Cognitive Engagement

The study results in Table A.4.11 and Figure A.4.11 shows the mediation effect of ASE on the relationship between PAV goal orientation and cognitive engagement. Model 1 indicates that regressing ASE on PAV was statistically significant (path a), $\beta = .15$, $t = 4.55$, $P < .01$ with $R^2 = 0.039$, which implies that PAV explained 3.9% variance in ASE. The regression coefficient indicated that PAV significantly predict ASE. Model 2 shows the total effect of the PAV on the cognitive engagement when the ASE is added in the model. Results indicate that PAV does not significantly predict cognitive engagement in the model (Paths c'), $\beta = 0.056$, $t = 1.48$, $p = .14$ while ASE significantly predicts cognitive engagement (path b), $\beta = .048$, $t = 9.75$, $p < .01$ with $R^2 = 0.175$. The R^2 value indicates that the model explains 17.5% of the variance in cognitive engagement.

Model 3 was conducted to determine the effect of PAV goal orientation on cognitive engagement when ASE is not included in the model. Results indicate that PAV goal orientation significantly predicts cognitive engagement (path c), $\beta = 0.13$, $t = 3.21$, $p = .001$. The R^2 value indicates that PAV goal orientation explains 2% of variance in cognitive engagement. The beta coefficients for PAV in path c and c' are different, with the latter value being lower. This implies that when ASE was added in the model, the effect of PAV

goal orientation on cognitive engagement increased with increase in explanation of variance in cognitive engagement from 2% to 17.5%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.05, 0.21). Therefore, ASE fully mediates PAV goal orientation and cognitive engagement.

Table A.4.12: The Mediation Effect of Academic Self-Efficacy on the Relationship between Performance Avoidance Goal Orientation and Agentic Engagement

Model	DV	IV/MV	β	T	P	R	R ²	F	SE	Bootstrap LLCI	ULCI
1	ASE	PAV	0.15	4.56	<.01	0.20	.039	20.76	0.03	0.09	0.22
2	AGE	PAV	0.04	1.13	= .26	0.47	.22	72.04	0.04	-0.03	0.12
		ASE	0.56	11.49	<.01				0.05	0.47	0.66
3	AGE	PAV	0.13	3.11	= .002	0.14	.019	9.61	0.04	0.10	0.23
4	a*b		0.09							0.05	0.13

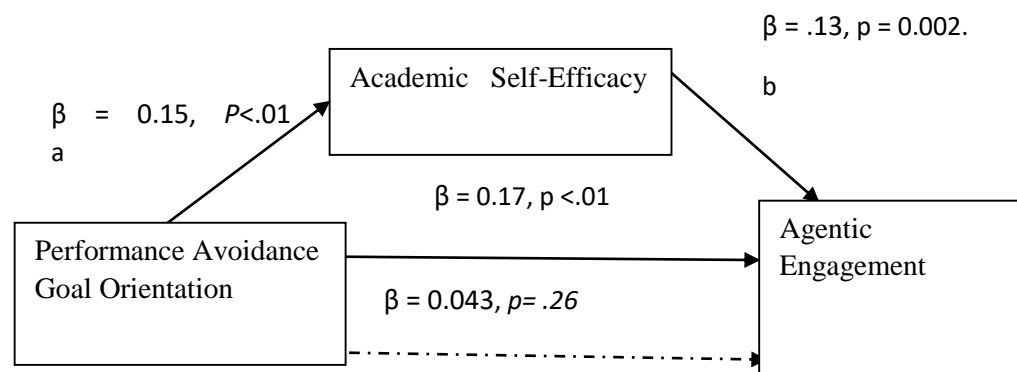


Figure A.4.12: The Mediation Effect of Academic Self-Efficacy on the Relationship between Performance Avoidance Goal Orientation and Agentic Engagement

The study results in Table A.4.12 Figure A.4.12 show the mediation effect of academic self-efficacy (ASE) on the relationship between PAV goal orientation and agentic engagement. Model 1 indicates that regressing ASE on PAV was statistically significant (path a), $\beta = .15$, $t = 4.55$, $P < .01$ with $R^2 = 0.039$, which implies that PAV explained 3.9% variance in ASE. The regression coefficient indicated that PAV significantly predict ASE. Model 2 shows the total effect of

the PAV on the agentic engagement when the ASE is added in the model. Results indicate that while ASE significantly predicts agentic engagement in the model (path b), $\beta = .056$, $t = 11.49$, $p < .01$ with $R^2 = 0.221$, PAV does not (Paths c'), $\beta = 0.043$, $t = 1.13$, $p = .26$. The R^2 value indicates that the model explains 22.1% of the variance in agentic engagement.

Model 3 was conducted to determine the effect of PAV goal orientation on agentic engagement when ASE is not included in the model. Results indicate that PAV goal orientation significantly predicts agentic engagement (path c), $\beta = 0.13$, $t = 3.10$, $p = 0.002$. The R^2 value indicates that PAV goal orientation explains 1.9% of the variance in cognitive engagement. The beta coefficients for PAV in path c and c' are different, with the latter value being lower. This implies that when ASE was added in the model, PAV goal orientation had no significant effect on agentic engagement and the effect decreased with an increase in explanation of variance in agentic engagement from 1.9% to 22.1%. The indirect effect (a*b) is significant because the bootstrap confidence interval does not contain a zero BootLLCI, BootULCI (0.05, 0.13). Results imply that there is a full mediation effect of academic self-efficacy on the relationship between performance avoidance goal orientation and agentic engagement among adolescent students in Kabale district, Southwestern Uganda. Moreover, the descriptive statistics revealed that there were large proportions of adolescent students who adopt performance avoidance goals. Interventions to enhance agentic engagement in low socio-economic status contexts should focus on academic self-efficacy enhancement.

Appendix B: Distribution of Participants Across Achievement Goal

Orientation Levels

Table B.1: Distribution of Participants Across Achievement Goal Orientation

Levels

		Mastery avoidance			Total
		Low n (%)	Moderate n (%)	High n (%)	
Mastery Approach (MAP)	Low	17(41.5)	21(51.2)	3(7.3)	41
	Moderate	39(33.1)	62(52.5)	17(14.4)	118
	High	92(26.2)	118(33.6)	141(40.2)	351
Total		148(29.0)	201(39.4)	161(31.6)	510
		Performance approach (PAP)			Total
		Low n (%)	Moderate n (%)	High n (%)	
Mastery Approach (MAP)	Low	14(34.1)	10(24.4)	17(41.5)	41
	Moderate	13(11.0)	39(33.1)	66(55.9)	118
	High	18(5.1)	88(25.1)	245(69.8)	351
Total		39(7.6)	137(26.9)	334(65.5)	510
		Mastery Avoidance (MAV)			Total
		Low n (%)	Moderate n (%)	High n (%)	
Performance approach (PAP)	Low	15(38.5)	18(46.2)	6(15.4)	39
	Moderate	45(32.8)	65(47.4)	27(19.7)	137
	High	88(26.3)	118(35.3)	128(38.3)	334
Total		148(29.0)	201(39.4)	161(31.6)	510
		Performance Avoidance (PAV)			Total
		Low n (%)	Moderate n (%)	High n (%)	
Performance Approach (PAV)	Low	10(25.6)	20(51.3)	9(23.1)	39
	Moderate	17(12.4)	44(32.1)	76(55.5)	137
	High	18(5.4)	73(21.9)	243(72.8)	334
Total		45(8.8)	137(26.9)	328(64.3)	510

Table B. 2: Self-Efficacy Levels of Adolescent Students in Secondary Schools in Kabale district, Southwestern Uganda

	N	Minimum	Maximum	Mean	Std. Deviation	Levels
Over all Self-Efficacy	510	1.76	5.00	3.3547	.527	Moderate
Social Self-Efficacy	510	1.86	5.00	3.4154	.621	Moderate
Academic Self-Efficacy	510	1.43	5.00	3.6182	.694	High
Emotional Self-Efficacy	510	1.29	5.00	3.0305	.729	Moderate

Table B.3: Academic Engagement levels of Adolescent Students in Secondary Schools in Southwestern Uganda

	N	Minimum	Maximum	Mean	Std. Deviation	Levels
Overall Academic Engagement	510	1.10	5.00	3.7235	.60390	High
Behavioural Engagement	510	1.00	5.00	4.0133	.70148	High
Emotional Engagement	510	1.00	5.00	3.7094	.68715	High
Cognitive Engagement	510	1.25	5.00	3.7319	.82510	High
Agentic Engagement	510	1.00	5.00	3.5218	.85028	Moderate
Valid N (listwise)	510					

Appendix C: Kreijce and Morgan (1970) Table for Sample Size

TABLE 1
Table for Determining Sample Size from a Given Population

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note.—*N* is population size.
S is sample size.

Appendix D: The Questionnaire for Students

Participants Identification:

Date of data collection			
School			

Dear participant, my name is Eunice Ndyareeba, a Ph.D. student at Kyambogo University. I am carrying out research entitled ‘Achievement Goal Orientation, Self-efficacy and Academic Engagement among Compassion-supported and non-supported Adolescents in Secondary Schools in Kabale district, Southwestern Uganda’. You have been selected to participate in this study because of your eligibility. Please note that there are no wrong or right answers, so you don’t have to think so hard to select a score. Just read a statement and respond as guided in each section and feel free to select an option that truly describes you. All information you provide was kept confidential as explained in the consent form that you have just signed.

Section D.1: Demographic Data

Please answer the following questions about yourself.

SN	Item	Response
1	Date of birth + Age	
2	Gender	
3	Compassion International support beneficiary	
4	School type	
5	Number of siblings	
6	Birth order	
7	In which class are you?	
8	Parent's/ Guardian's marital status	a) Married b) Single c) Widowed d) Divorced
9	Parent's / guardian's education level	a) Not educated b) Primary c) Secondary d) Tertiary
10	Parents' income per month	

The following statements describe how you feel about your studies. There is no right or wrong response. You are required to tick a box that describes the way you feel about your studies. AS = Strongly Agree, A= Agree, U= Unsure, D= Disagree, SD = Strongly Disagree.

Section B: Achievement Goal Orientation						
		SD	D	U	A	SA
MAP_1	My goal is to fully understand the contents taught in class					
MAP_2	My goal is to learn as much as I can in class					
MAP_3	I try very hard to understand as deeply as possible in this subject matter					
PAP_4	I am determined to do well when compared to other students					
PAP_5	My goal is to behave well when compared to other students					
PAP_6	My goal is to produce better work than other students					
MAV_7	My goal is to avoid learning less than my capability					
MAV_8	My goal is to avoid learning less than what it should be					
MAV_9	I try to avoid partially understanding the subject content					
PAV_10	My goal is to avoid having bad work when compared to other students					
PAV_11	I try hard to avoid producing worse work than others					
PAV_12	My goal is to avoid producing worse work than other students					

The following statements describe how well you feel about your studies. You are required to tick a box that best describes how feel about the statement. Scores range from Not at all= 1 to Very well= 5.

Section C: Self-Efficacy Questionnaire for Children and adolescents (SEQ-C)		Not at all	Not well	Slightly well	Well	Very well
SSE_1	How well can you express your opinions when other classmates disagree with you?					
SSE_2	How well can you become friends with other children?					
SSE_3	How well can you have a chat with an unfamiliar person?					
SSE_4	How well can you work in harmony with your classmates?					
SSE_5	How well can you tell other children that they are doing something that you don't like?					
SSE_6	How well can you tell a funny event to a group of children?					
SSE_7	How well do you succeed in staying friends with other children?					
ASE_8	How well can you study when there are other interesting things to do?					
ASE_9	How well can you study a chapter for a test?					
ASE_10	How well do you succeed in finishing all your homework every day?					
ASE_11	How well can you pay attention during every class?					
ASE_12	How well do you succeed in passing all subjects?					
ASE_13	How well do you succeed in satisfying your parents with your schoolwork?					
ASE_14	How well do you succeed in passing a test?					
ESE_15	How well can you succeed in cheering yourself when an unpleasant event has happened?					
ESE_16	How well can you succeed in becoming calm again when you are very scared?					
ESE_17	How well can you prevent becoming nervous?					
ESE_18	How well can you control your feelings?					
ESE_19	How well can you give yourself a pep talk when you feel low?					
ESE_20	How well do you succeed in suppressing unpleasant thoughts?					
ESE_21	How well do you succeed in not worrying about things that might happen?					

The following statements describe how true you feel about your studies. You are required to tick a box that best describes how feel about the statement. Scores range from Never = 1 to Very true = 5.

Section D: School Engagement Questionnaire SEQ						
		Never	Not true	Not sure	True	Very true
BE_1	When I'm in this class, I listen very carefully					
BE_2	I pay attention in this class					
BE_3	I try hard to do well in this class					
BE_4	In this class, I work as hard as I can					
BE_5	When I'm in this class, I participate in class discussions					
EE_6	When we work on something in this class, I feel interested					
EE_7	This class is fun					
EE_8	I enjoy learning new things in this class					
EE_9	When I'm in this class, I feel good					
EE_10	When we work on something in this class, I get involved					
CE_11	When I study for this class, I try to connect what I am learning with my own experiences					
CE_12	I try to make all the different ideas fit together and make sense when I study for this class					
CE_13	When doing work for this class, I try to relate what I'm learning to what I already know					
CE_14	I make up my own examples to help me understand the important concept I study for this class					
AGENT_15	I let my teacher know what I need and want					
AGENT_16	I let my teacher know what I am interested in					
AGENT_17	During this class, I express my preferences and opinions					
AGENT_18	During class, I ask questions to help me learn					
AGENT_19	When I need something in this class, I'll ask the teacher for it					
AGENT_20	I adjust whatever we are learning so I can learn as much as possible					
AGENT_21	I try to make whatever we are learning as interesting as possible					

Appendix D. 2: Key Informant Interview for Adolescents

Dear Participant,

This interview is intended to obtain your views on issues that influence academic engagement among adolescents in secondary schools in Kabale district, Southwestern Uganda. The information you give will help me in writing up my dissertation in fulfilment of the requirements for the award of a Doctor of Philosophy degree of Kyambogo University. You have been selected to participate in the study because I believe you have experience in these issues as a secondary school adolescent student. I was very grateful for your cooperation and honesty in giving responses to the issues. **All your responses will remain confidential. Your names and identities will not be revealed in the report**

	Question	Probe
<p>Objective</p> <p>What might influence academic engagement variation among Compassion and non-compassion-supported adolescent students in Kabale district, Southwestern Uganda</p>	Kindly introduce yourself	Tell me your name, your class, the person that pays your schools fees
	Do you think you and/or your classmates engage in classwork to master content or to outperform their counterparts?	Why do you think so? Do you think they engage to win their classmates, master the content to apply it elsewhere? Or to please the school administration?
	How do you describe the general reason behind your or your friends' motivation to engage in academic work?	How do you know? Please summarise your description in short terms
	Do you think some adolescents avoid some subjects because they may learn less than what they should?	Fear of failure, history of the school, their previous experience with the subject etc?
	Do some students avoid engaging in subjects where they feel they may perform worse compared to their counterparts	Why do you think so? Why or why not? How do you know?
	Do you think compassion-supported adolescents engage in academic work better than their non-supported counterparts?	Please describe what you think can be done to help you/your classmates engage better
	In what ways can adolescent students be helped to engage in academic work more than they currently do?	

Appendix D.3: Interview Guide for Teachers, Compassion Workers and

Directors of Studies

Dear Participant, this interview is intended to obtain your views on issues that influence academic engagement among adolescents in secondary schools in Kabale district, Southwestern Uganda. The information you give will help me in writing up my dissertation in fulfilment of the requirements for the award of a Doctor of Philosophy degree of Kyambogo University. You have been selected to participate in the study because I believe you have experience in these issues as a contact person responsible for students' education welfare. I was very grateful for your cooperation and honesty in giving responses to the issues. **All your responses will remain confidential. Your name and identity will not be revealed in the report**

	Question	Probe
Objective	<p>Kindly introduce yourself</p> <p>Please let us know who you are and your role in the life of secondary school adolescents</p>	Tell me your name, your role in the life of adolescents under your care
What might influence academic engagement variations among adolescent students in Kabale district, Southwestern Uganda	<p>1. How do you describe the general reason behind adolescents' motivation to engage in academic work?</p> <p>2. Why do you think adolescents you teach/ under your care work as hard as they do in academic work?</p> <p>3. Do some students avoid engaging in subjects where they feel they may perform worse compared to their counterparts</p> <p>Do you think compassion-supported adolescents engage in academic work better than their non-supported counterparts?</p> <p>In what ways can students be helped to engage in academic work more than they currently do?</p>	<p>Put reasons in single words</p> <p>Why do you think so? You can summarise your reasons in short terms</p> <p>Why or why not? How do you know?</p> <p>What could be influencing variations in students' engagement in academic work</p> <p>Please suggest strategies to help to improve adolescent students' engagement in academic work</p>

Appendix E: Article Publications

Achievement of Goal Orientation and Academic Engagement among Adolescents in Southwestern Uganda

Eunice Ndyareeba^{1, 2*}, Judith Biirah² & Henry Kasawo Kibedi¹

1 Kyambogo University, P. O. Box 1, Kyambogo, Uganda.

2 Kabale University, P. O. Box 317, Kabale, Uganda.

* Author for Correspondence ORCID ID: [https://orcid.org/0000-0002-3442-](https://orcid.org/0000-0002-3442-0826)

0826; Email: emurokore@kab.ac.ug Article DOI:

<https://doi.org/10.37284/eajes.7.2.1848>

Abstract

Enhancing academic engagement is essential for improving the educational experiences of adolescents. Guided by Social Cognitive Theory, this study explored the relationship between achievement goal orientation and academic engagement among 510 secondary school students in Southwestern Uganda. The study focused on two forms of goal orientation—mastery-approach and performance-approach goals—and examined the mediating and moderating role of academic self-efficacy. The results, derived from self-reported data, indicate that approach achievement goals (mastery and performance) positively predict academic engagement, independently. Moreover, academic self-efficacy plays a dual role: while it mediates the relationship between approach achievement goals (mastery and performance) and academic engagement, self-efficacy also moderates the relationship between performance-approach achievement goals and academic engagement. These findings underscore the importance of academic self-efficacy and achievement goal orientation in enhancing academic engagement among adolescent students, especially in low socioeconomic status communities. This research contributes to the understanding of factors like teacher-student relationship, external support offered by Compassion International program, goal setting skills training and predetermined external rewards can enrich the educational experiences of students in low resource education contexts.

Keywords: Achievement Goal Orientation, Academic Self- Efficacy, Academic Engagement, Adolescent Student.

**Student Gender and Support by Compassion International Influences
Achievement Goal Orientation among Adolescents in South-western
Uganda**

Eunice Ndyareeba^{1*}, Zanna Clay², Judith Biirah¹ & Henry Kasawo Kibedi¹

1 Kyambogo University, P. O. Box 1, Kyambogo, Uganda. 2 Durham University, Durham DH1 3LE, UK. 3 Kabale University, P. O. Box 317, Kabale - Uganda.

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Article DOI: <https://doi.org/10.37284/ijar.7.1.2161> Publication

Abstract

The adoption of achievement goal orientation is a crucial factor in shaping an individual's attitudes and behaviours towards learning. The aim of this study was to investigate the impact of gender and support from Compassion International on the adoption of achievement goal orientation (AGO). The study used parallel mixed methods approach to sample 510 adolescent students aged 12 -21 years were included in the study. Both Compassion International support beneficiaries and non- beneficiaries were recruited for the study. The Mann-Whitney Test for Differences yielded statistically significant findings regarding the adoption of achievement goal orientation in relation to gender and support from Compassion International. Mann-Whitney U Test was used because it was suitable for comparing overall distribution of participants across gender and Compassion International support since the numbers of respondents within each of the two categories were not uniformly distributed. The adoption of mastery approach (MAP) and performance avoidance goals (PAV) was found to be predicted by Gender, whereas mastery goals (approach and avoidance) and performance approach goals (PAP) were predicted by support from Compassion International. The findings of the study offer valuable insights into the possible gender- based discrepancies in achievement goals orientation and underscore the significance of compassion support in promoting achievement goal orientation that results in self-skill enhancement. This information can serve as a valuable resource for educators, parents, and policymakers in formulating effective approaches that tackle gender-based disparities as well as integrating external support initiatives by non-governmental organisations within the educational framework to foster fair and enduring educational outcomes.

Key Words: Achievement Goal Orientation, Compassion Support Beneficiaries, Non- Beneficiaries, Mastery Approach, Mastery Avoidance, Performance Approach, Performance Avoidance.

External Support and Demographic Factors as Differentials of Achievement Goal Orientation among Adolescent Students in Resource-Limited Environments

Eunice Ndyareeba^{1,2*}, Judith Biirah², Henry Kasawo Kibedi¹ & Zanna Clay³

1 Kyambogo University, P. O. Box 1, Kyambogo-Kampala, Uganda.

2 Kabale University, P. O. Box 317, Kabale - Uganda. 3 Durham University, Durham DH1 3LE, United Kingdom.

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Article DOI: <https://doi.org/10.37284/eajes.7.4.2204> Date Published:


Abstract

This study unveils demographic factors (age, gender, school type, compassion support, parental education, income) as correlates of achievement goal orientation. Using a convergent parallel mixed methods approach, the study investigated the influence of these demographic characteristics on achievement goal orientation among 510 adolescent students aged 12-21 (231 males, 279 females) in secondary schools in Southwestern Uganda. Using Achievement Goal Questionnaire (AGQ-R) Scale and key informant interview guide, achievement goal orientation preferences and the influence of external support were respectively measured. Qualitative findings revealed teacher-student relationships, goal-setting training, defined external rewards, and peer pressure as critical factors that influence achievement goal orientation choice. Kruskal Wallis and Mann-Whitney U test results revealed that parents income and education level, students school type and external support influenced achievement goal orientation preference among adolescent students in southwestern Uganda. In conclusion, this research provides a comprehensive understanding of the intricate interconnectedness of these variables, offering valuable insights to enrich educational interventions especially in resource-limited learning environments. This study contributes to the ongoing efforts to increase adoption of achievement goal orientation that result in self-skill enhancement through targeted and effective educational interventions.

Keywords: Achievement Goal Orientation, Compassion

International Support, Adolescent Student.

Appendix E: Introductory Letter from Kyambogo University Directorate of Research and Graduation and Training


KYAMBOGO UNIVERSITY
P. O. BOX 1 KYAMBOGO
Tel: 041 - 4286792 Fax: 256-41-220464
Website :www.kyu.ac.ug Email: drgt@kyu.ac.ug
Directorate of Research and Graduate Training
Office of the Director

APPENDIX 8

Date: 2/9/2022

TO WHOM IT MAY CONCERN

RE: EUNICE NBYAREERA


Dear Sir/Madam,

This is to introduce to you the above named student Reg: No 2019/U/GRED/118562/PA pursuing A.P.H.D. IN EDUCATION. Department of FOUNDATIONS OF EDUCATION AND EDUCATIONAL PSYCHOLOGY, Kyambogo University. She/he intends to carry out research on ACHIEVEMENT GOAL ORIENTATION, SELF-EFFICACY AND ACADEMIC ENGAGEMENT.....in partial fulfillment of the requirements of the award of DOCTOR OF PHILOSOPHY IN EDUCATION OF KYAMBOGO UNIVERSITY.

The purpose of this letter therefore is to request you to grant him/her permission to carry out his/her study in your institution.

Any assistance rendered to her/him will be highly appreciated.

Yours sincerely,


Prof. Bosco Bua
AG. DIRECTOR

KYAMBOGO UNIVERSITY

★ 02 SEP 2022 ★

DIRECTOR

DIRECTORATE OF RESEARCH AND GRADUATE TRAINING

**Appendix F: Community Entry and Engagement Acceptance Letter from
District Inspector of Schools**

IN ANY CORRESPONDENCE ON THIS
SUBJECT PLEASE QUOTE

Our REF: EDUC



THE REPUBLIC OF UGANDA

KABALE DISTRICT LOCAL GOVERNMENT
EDUCATION AND SPORTS DEPARTMENT
P.O.BOX 5
KABALE

Date: 15/12/2022

**Ms Eunice Ndyareeba
Kyambogo University**

Dear Ndyareeba,

Permission to Collect Data in Secondary Schools in Kabale District

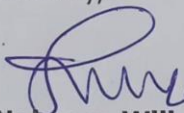
Reference is made to the email sent to us by UNCST on the 12th of December 2022 asking you to obtain administrative clearance from District Education officer of Kabale district permitting you to conduct research entitled 'Achievement Goal orientation, Self-efficacy and academic engagement among Compassion and Non-compassion supported adolescent students in Secondary schools in Kabale District'. (**reference number, A250ES**).

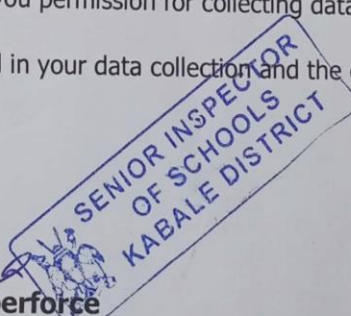
I have noted that you have already obtained ethical clearance from Mbarara University of Science and Technology Ethics Committee and you are now pursuing clearance from Uganda National Council for Science and Technology.

This is to grant you permission for collecting data from the selected schools in Kabale District.

Wishing you well in your data collection and the entire study

Sincerely,


Nabaasa Wilberforce
DISTRICT INSPECTOR OF SCHOOLS/KABALE



Appendix G: Research Ethics Committee Approval Letter



MBARARA UNIVERSITY OF SCIENCE AND TECHNOLOGY
P.O. Box 1410, Mbarara Uganda. Tel: +256 43431191 Fax: +256 4854 20782
RESEARCH ETHICS COMMITTEE
E-mail: sec.rec@must.ac.ug

To: EUNICE Ndyareeba

+256773240634

Type: Initial Review



18/11/2022

Re: MUST-2022-620: Achievement Goal Orientation, Self-efficacy and Academic Engagement among Adolescent students in Secondary Schools in Southwestern Uganda , ,

I am pleased to inform you that at the 148 convened meeting on 11/11/2022, the MUST Research Ethics Committee, committee meeting, etc voted to approve the above referenced application. Approval of the research is for the period of 18/11/2022 to 18/11/2023.

As Principal Investigator of the research, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the research.
2. Changes, amendments, and addenda to the protocol or the consent form must be submitted to the REC for re-review and approval **prior** to the activation of the changes.
3. Reports of unanticipated problems involving risks to participants or any new information which could change the risk benefit: ratio must be submitted to the REC.
4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by participants and/or witnesses should be retained on file. The REC may conduct audits of all study records, and consent documentation may be part of such audits.
5. Continuing review application must be submitted to the REC **eight weeks** prior to the expiration date of **18/11/2023** in order to continue the study beyond the approved period. Failure to submit a continuing review application in a timely fashion may result in suspension or termination of the study.
6. The REC application number assigned to the research should be cited in any correspondence with the REC of record.
7. You are required to register the research protocol with the Uganda National Council for Science and Technology (UNCST) for final clearance to undertake the study in Uganda.

The following is the list of all documents approved in this application by MUST Research Ethics Committee:

Appendix H: Approval Letter from Uganda National Council for Science and Technology



Uganda National Council for Science and Technology
(Established by Act of Parliament of the Republic of Uganda)

Our Ref: SS1562ES 23 December 2022

EUNICE Ndyareeba
Kabale University
Kabale

Re: Research Approval: Achievement Goal Orientation, Self-efficacy and Academic Engagement among Compassion and Non-compassion supported Adolescent students in Secondary Schools in Kabale district, Southwestern Uganda

I am pleased to inform you that on **23/12/2022**, the Uganda National Council for Science and Technology (UNCST) approved the above referenced research project. The Approval of the research project is for the period of **23/12/2022** to **23/12/2023**.

Your research registration number with the UNCST is **SS1562ES**. Please, cite this number in all your future correspondences with UNCST in respect of the above research project. As the Principal Investigator of the research project, you are responsible for fulfilling the following requirements of approval:

1. Keeping all co-investigators informed of the status of the research.
2. Submitting all changes, amendments, and addenda to the research protocol or the consent form (where applicable) to the designated Research Ethics Committee (REC) or Lead Agency for re-review and approval **prior** to the activation of the changes. UNCST must be notified of the approved changes within five working days.
3. For clinical trials, all serious adverse events must be reported promptly to the designated local REC for review with copies to the National Drug Authority and a notification to the UNCST.
4. Unanticipated problems involving risks to research participants or other must be reported promptly to the UNCST. New information that becomes available which could change the risk/benefit ratio must be submitted promptly for UNCST notification after review by the REC.
5. Only approved study procedures are to be implemented. The UNCST may conduct impromptu audits of all study records.
6. An annual progress report and approval letter of continuation from the REC must be submitted electronically to UNCST. Failure to do so may result in termination of the research project.

Please note that this approval includes all study related tools submitted as part of the application as shown below:

No.	Document Title	Language	Version Number
1	Informed consent for key informants	English	ORIGINAL
2	Data collection Tools	English	ORIGINAL
3	Informed consent for adolescents	English	ORIGINAL
4	Project Proposal	English	ORIGINAL
5	Approval Letter	English	
6	Administrative Clearance	English	
6	COVID_19 and EBOLA RIST MITIGATION PLAN	English	Original
7	Care giver Consent Form	English	Original
8	Assent Document	English	Original

Yours sincerely,

Hellen Opolot
For: Executive Secretary

UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

This is to certify that I, Ssekagya Eric W. K., have carried out the language editing of Ms Eunice Ndyareeba's Dissertation Entitled: **Achievement Goal Orientation, Self-Efficacy and Academic Engagement among Adolescent Students in Kabale District, Southwestern Uganda**

The editing was carried out between 12th to 20th August 2024 and all noted language errors in the work were adequately adjusted.

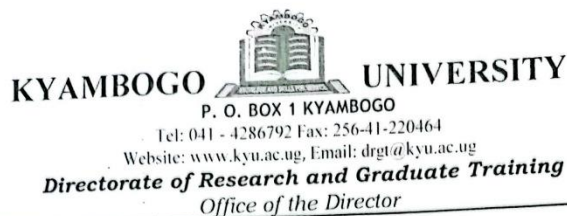
Signed

A handwritten signature in blue ink, appearing to read 'Ssekagya Eric Willy Kasirye', with a circular stamp or mark to the left.

SSEKAGYA ERIC WILLY KASIRYE
LANGUAGE EXPERT

Appendix J: Plagiarism Clearance Certificate

Appendix J.1: Clearance Certificate from Supervisor



APPENDIX 7: PLAGIARISM CLEARANCE CERTIFICATE

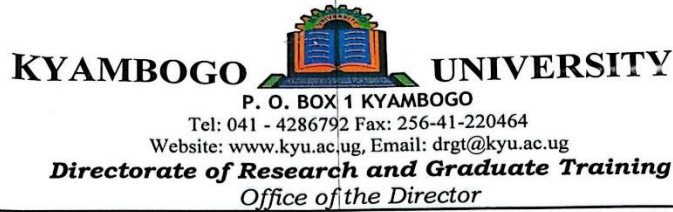
NAME OF STUDENT: EUNICE NDIAREEBA
REGISTRATION NO.: 2019/41.G.D.E.D.185621.PD
DEPARTMENT: FOUNDATIONS OF EDUC & EDUCATIONAL PSY.
FACULTY/SCHOOL: EDUCATION

I, DR. HENRY KIBBYI do hereby declare that the

proposal/Dissertation of the above mentioned student
titled: ACHIEVEMENT GOAL ORIENTATION, SELF-EFFICACY
AND ACADEMIC ENGAGEMENT AMONG ADOLESCENT
STUDENTS IN KABALE DISTRICT, UGANDA
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Signature: [Handwritten Signature]
Designation: Senior Lecturer
Date: 3/10/2024

Appendix J.2: Clearance Certificate from University Librarian



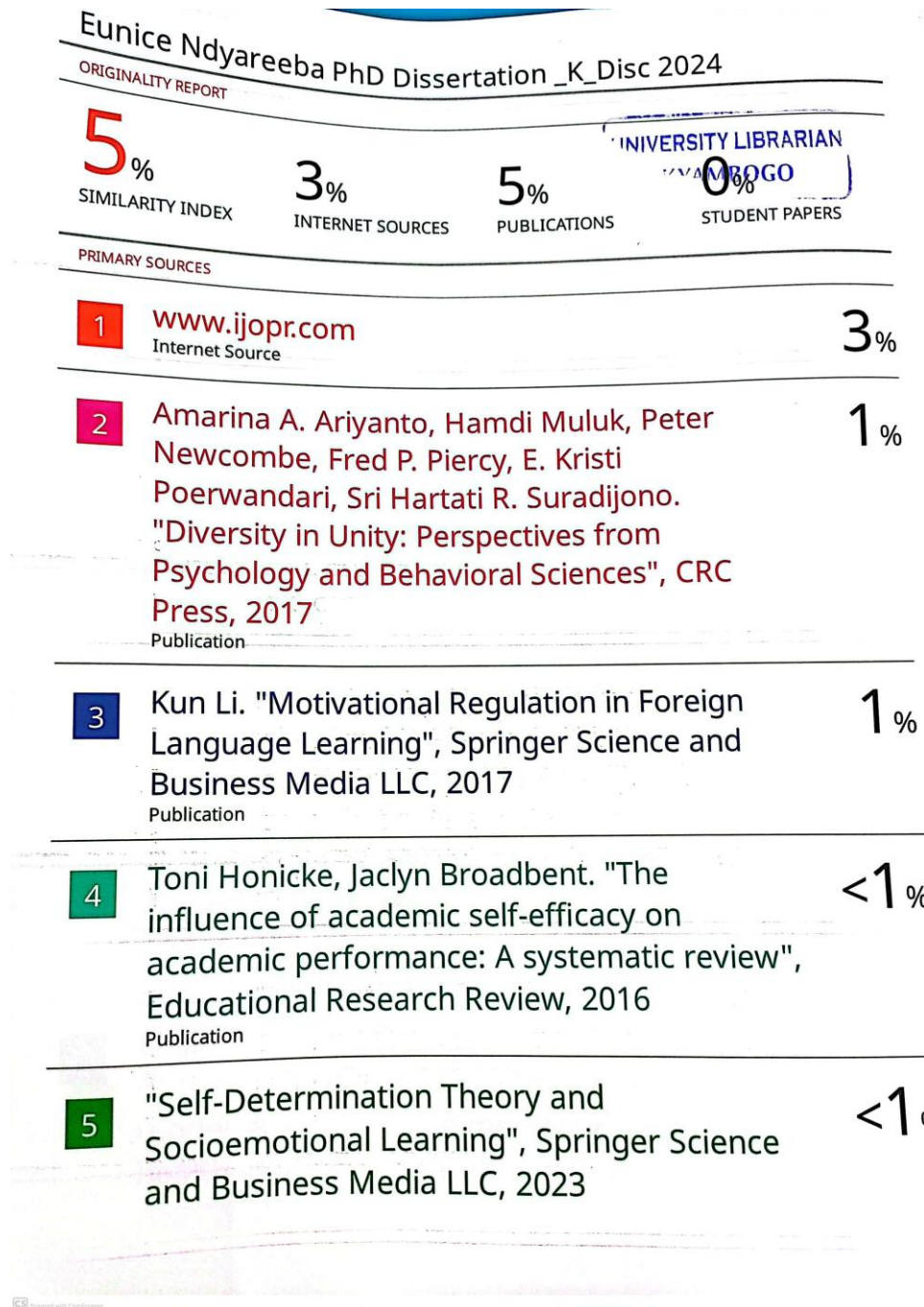
APPENDIX 7: PLAGIARISM CLEARANCE CERTIFICATE

NAME OF STUDENT: EUNICE NDYARIE EBA.....
REGISTRATION NO: 2.019/U.I.G.DED.18562/PA.....
DEPARTMENT: FOUNDATIONS OF EDUCATION & EDUC. PSYCHOLOGY
FACULTY/SCHOOL: EDUCATION.....

I, Elizabeth N. Slatte.....do hereby declare that the
proposal/Dissertation of the above mentioned student
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EFFICACY & ACADEMIC ENGAGEMENT AMONG ADOLESCENT
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similarity index of 5% against the Senate threshold of 20%.

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Signature: Elizabeth N. Slatte.....
Designation: University Librarian.....
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Appendix K: Similarity Index Report



Publication

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10 Zhuofan Huang, Riyan Hidayat, AHMAD FAUZI MOHD AYUB. "The mediating effect of engagement in the relationship between self-efficacy and perceived learning in the online mathematics environment among Chinese students", Springer Science and Business Media LLC, 2024 Publication <1 %

11 Linjin Li, Zhaoyi Xu, Dan Zhang. "Optimization of the elderly multimorbidity management model: A study on the mediating effect of health literacy on self-efficacy and health <1 %

status", Springer Science and Business Media
LLC, 2024
Publication

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"Análisis empírico y teórico del efecto de
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