A Correlational Study of the Relationship Between
Learner Autonomy and Academic Performance

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Dedication

For Kristi, Anne, Dale, Kathy and Floyd

Acknowledgments

First and foremost I give thanks to **God** for his patience, love and grace. Thank you almighty father for helping me.

Next I'd like to give thanks to my wife **Kristi** who was by my side for the whole journey. LYLM4E. I'd also like to recognize my **Mom** for her unconditional love. You were always there for me and I'm so grateful for it. My thanks also to **Dad** who guided me to college in the first place and who always knew just what to say – in good times and bad. To **Kathy** – thanks for being my friend and supporter. I'm blessed to have you in my life.

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Abstract

The study examined the relationship between Learner Autonomy as measured by the Learner Autonomy Profile Short Form (LAP-SF) and Academic Performance as measured by GPA. The research question that was investigated was: What is the correlation between Learner Autonomy and academic performance in adult learners, as measured by the constructs and components of the Learner Autonomy Profile (LAP)? The correlation was measured for 125 participants from the George Washington University in Washington, D.C. and analysis of the results found that there is a positive, significant relationship between the LAP-SF and GPA for the total score, all four LAP-SF constructs and nine of the 22 components. Of these elements, the *Planning* component had the strongest correlation coefficient at .275 and was closely followed by the *Self-Regulation* component with a coefficient of .270. The findings point to the possibility that the LAP-SF may be useful as a proxy for GPA in some cases, and as a diagnostic tool for improving academic performance.

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CHAPTER 1 – INTRODUCTION

Overview

While standardized test scores and past academic performance have been noted to be the best predictors of college performance (Shivpuri, Schmitt, Oswald, Kim, 2006), there are still some significant problems associated with them. A review of the performance literature by Mouw & Khanna (1993) found that these measures have an R^2 value less than .25 – leaving a great deal of unexplained variance in collegiate academic performance.

This is important because of the huge investment that students and schools make in the educational marketplace. Students seek education with an outcome in mind and if the time and money they spend on their education is for naught then they have wasted precious resources. Likewise, schools typically choose their incoming classes based on predictors of academic performance (GPA, Class Rank, SAT, etc.). How well they succeed in graduating students has a huge impact on reputation, which in turn impacts grants, and funding for important research.

With this in mind, this dissertation explored an area that has promise for predicting academic performance: Learner Autonomy (LA). LA is described (Confessore, G., 2000) as a continuum with dysfunctional learner dependence residing at one extreme and dysfunctional learner independence at the other (see

Fig. 1, below). The middle of this continuum is described as functional learner autonomy – a state in which optimal learning can occur because the learner is able to perform independent study, but is also willing to seek help when necessary.

Figure 1. Functional Learner Autonomy.

```
                          Functional Learner
                               Autonomy
  |-----------------------(-----------------------------------)-----------------------|

     Dysfunctional                                                Dysfunctional
     Learner                                                            Learner
     Dependence                                                     Independence
```
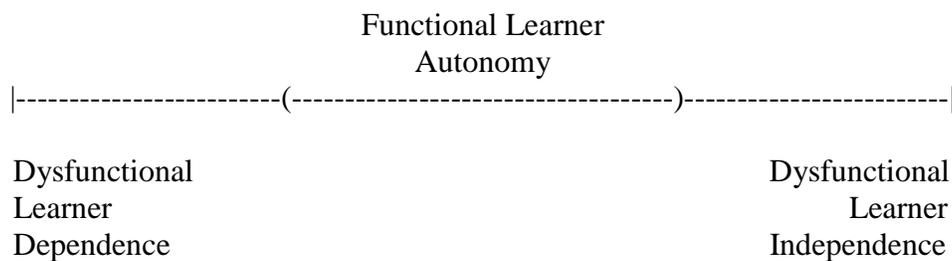
Two questions immediately come to mind: Can LA be measured? And if so, how does it correlate with academic performance? The first question has been answered through the development of an instrument called the Learner Autonomy Profile (LAP). This fully validated tool (Confessore, 2000) allows researchers to determine the placement of individual learners on a number of constructs and components. The makeup of this instrument will be further discussed in the methods section of this document.

The second question was the central focus of this dissertation. I investigated the relationship between LA and academic performance in order to help establish the meaning and significance of the LA construct while also providing a potential benefit to the educational community.

Statement of the Problem

Academic researchers and college admissions boards often question the value of standard measures such as high school GPA because of socio-economic factors impacting the student, and potential disparity in the quality of education received (Chaker, 2003; Ferber, Birnbaum and Green, 1983; DeBerard, Spielman and Julka, 2004). Therefore other measures – with a potential for greater predictive ability – can only help in selection and retention of students.

Research on Learner Autonomy has been largely confined to validation of the construct, description of groups, or investigation of Asian student cohorts (Carr, 1999; Ponton, 1999; and Derrick, 2001). A clear link between LA and academic performance has not yet been explored which leaves a gap in the literature of both LA and academic performance.

Purpose and Research Question

The purpose of this study was to investigate the relationship between learner autonomy and academic performance. The central question of this study was: What is the correlation between Learner Autonomy and academic performance in adult learners, as measured by the constructs and components of the Learner Autonomy Profile (LAP)?

Hypotheses:

Hypothesis 1: There is a significant correlation between the *Learner Desire* construct score of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1a. There is a significant correlation between the *Circumstance component* score of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1b. There is a significant correlation between the *Expression component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1c. There is a significant correlation between the *Group Identity component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1d. There is a significant correlation between the *Growth and Balance component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1e. There is a significant correlation between the *Love Issues component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1f. There is a significant correlation between the *Communication Skills component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1g. There is a significant correlation between the *Change Skills component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

Hypothesis 2: There is a significant correlation between the *Learner Initiative* construct score of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

2a. There is a significant correlation between the *Goal-Directedness component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

2b. There is a significant correlation between the *Action-Orientation component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

2c. There is a significant correlation between the *Overcoming Obstacles component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

2d. There is a significant correlation between the *Active-Approach component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

2e. There is a significant correlation between the *Self-Starting component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

Hypothesis 3: There is a significant correlation between the *Learner Persistence construct score* of the Learner Autonomy Profile-Short Form and academic performance as measure by college GPA.

3a. There is a significant correlation between the *Volition component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

3b. There is a significant correlation between the *Self-Regulation component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

3c. There is a significant correlation between the *Goal-Maintenance component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

Hypothesis 4: There is a significant correlation between the *Learner Resourcefulness* construct score of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4a. There is a significant correlation between the *Learning Priority component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4b. There is a significant correlation between the *Deferring Gratification component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4c. There is a significant correlation between the *Resolving Conflict component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4d. There is a significant correlation between the *Future Orientation component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4e. There is a significant correlation between the *Planning component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4f. There is a significant correlation between the *Evaluating Alternatives component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4g. There is a significant correlation between the *Anticipating Consequences component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

Hypothesis 5: There is a significant correlation between the *Total* score of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

Statement of Potential Significance

This study made three major contributions. The first is to the literature on Learner Autonomy, where a relationship between LA and academic performance has not been fully explored. A second contribution was to the literature on academic performance, where most of the focus is on the educational needs of children. Here there is a dearth of research on adult learners – particularly in terms of Learner Autonomy. Finally, this study provided a practical benefit in that it may help allow students and schools to capitalize on their investment.

Current measures of educational potential (GPA, Class Rank, SAT, etc.) have been shown to be valid predictors of college academic performance but

don't necessarily point toward a student's real potential (Mouw & Khanna, 1993). Variables such as learning style, class size and emotional development can impact these indicators in such a way as to not give a clear picture of what a student is capable of (Rode et al., 2005).

Given the amount of unexplained variance in collegiate academic performance (Mouw & Khanna, 1993), standardized test scores and past academic performance may not be the best predictors of college achievement. With the huge investment that students and schools make in the educational marketplace, it is imperative that factors be explored that may help. The value of this effort is that the time and money students spend on their education won't be for naught and schools will see better graduation rates – positively impacting their reputation, grants and funding for important research.

Conceptual Framework

In order to fully investigate the role of learner autonomy in academic performance, it was necessary to look at two constructs: learner autonomy and academic performance. The first construct is grounded in the early work of Houle (1961), Knowles (1980), Spear and Mocker (1984) along with more contemporary research by Confessore (1992), Ponton (1999), Carr, (1999), Meyer (2001) and Derrick (2001). The second builds on Lavin (1965) and Mouw & Khanna (1993) as well as more contemporary research on achievement and

assessment (Tross et al, 2000; Deberard et al, 2004; Grove, Wasserman & Grodner, 2006)

<div align="center">*Constructs & Variables*</div>

Learner Autonomy

Learner autonomy is the relative capacity to participate in learning experiences (Confessore & Confessore, 1999). It is a continuum that has functional learner autonomy at its center with extremes of dysfunctional learner autonomy at its ends. The dysfunctional states are labeled dependent and independent with an assumption that too much of either quality takes a learner away from the optimal state known as functional learner autonomy.

The variables associated with learner autonomy are: *desire, resourcefulness, initiative, and persistence*. *Desire to learn* describes the individual's motivation to participate in a learning experience, while *resourcefulness* means the learner's intention to be resourceful. *Initiative* describes the person's willingness to initiate learning and *persistence* describes the person's intention to continue learning activities (see Ponton, 1999; Carr, 1999; Meyer , 2001 and Derrick, 2001 for research focused on these specific components of LA)

Academic performance

The second construct that served as a foundation for the theoretical framework was the idea of academic performance. Academic performance has

been a central issue in education for as long as it has existed. While there is a dearth of literature in this area, the dialogue tends to be centered along three major themes: Meaning & Measurement, Summative vs. Formative measurement, Underachievement and Overachievement, and predictors of performance. This section seeks to review the issues centered on these themes.

Relationship between the Constructs

The range of possible conditions inherent in LA creates a non-linear relationship with academic performance. That is to say, when learner autonomy is low, so too will achievement be low. Likewise, when autonomy is high, achievement will again be low. Only at the center – the condition known as functional learner autonomy – is academic performance high.

Many factors influence the potential relationship between the constructs. For example, Wood & Atkins (2000) suggested that strategy plays a mediating role between self-efficacy (a key component of LA) and performance on complex tasks. Likewise Rode et al. (2005) explored the relationship between life satisfaction and student performance while Braunstein, McGrath and Pescatrice (2000) investigated the impact of financial factors on persistence (another key component of LA).

Summary of the Methodology

This study used an empirical approach to investigate the relationship between Learner Autonomy and academic performance in adult learners enrolled

at a university in the Washington, D.C. metropolitan area. The level of LA was determined by using the Learner Autonomy Profile (LAP) constructs and components, while academic performance was determined by cumulative GPA.

Research Design

In this correlational study, participants' scores received on the LAP constructs and components were treated as dependent variables and their cumulative GPAs were treated as independent variables.

Population and Sampling

The population of interest for this study was adult learners attending a formal educational institution such as a college or university. The sample consisted of adult learners enrolled at a university in the Washington, D.C. metropolitan area.

Data Collection Procedures

The Learner Autonomy Profile was administered online to study participants. Once potential participants had been recruited, a letter was sent to them with instructions and an informed consent form. When participants signed and returned the IRB required consent form, an ID# and password was assigned to them so that they could access the online instrument. When participants accessed the instrument, demographic data, including cumulative GPA was collected to inform the study.

Instrumentation

Data for this study was gathered via the LAP instrument. The LAP has 22 components that are centered around four constructs: desire, resourcefulness, initiative, and persistence. Desire describes the individual's motivation to participate in a learning experience, while resourcefulness means the learner's intention to be resourceful. Initiative describes the person's willingness to initiate learning and persistence describes the person's intention to continue learning activities. Taken together, these four constructs provide an accurate assessment of an individual's relative capacity to undertake a self-directed learning experience.

Data Analysis

When LAP scores were collected for the study participants an analysis was conducted on the data to determine the correlation between LA and academic performance.

Limitations and Delimitations

While this study has important implications for adult learning, academic performance and learner autonomy, it is important to recognize the limitations related to the effort. This study was limited by a number of constraints including the following:

1) The sample consisted of students enrolled at a single university in the Mid-Atlantic region of the United States. Therefore, the results may not be generalizable to all college students throughout the country.

2) The university used for this study was a private institution so the findings may not be the same as those that would be found at a public or state university.

3) Though the instrument sought to minimize it, it is possible that the nature of a survey-based study may introduce issues such as question ambiguity, personal bias and lack of knowledge by the respondent.

4) Because this was not a longitudinal study, the overall stability of the study may be subject to question.

Definition of Terms

Academic performance – Collegiate academic performance as measured by objective standards such as G.P.A., Class Rank, etc.

Action Orientation – The behavior of a learner quickly translating a learning goal into a learning activity (Ponton, 1999).

Active-Approach – Refers to the behavior of a learner taking the responsibility to develop solutions that overcome the aforementioned obstacles (Ponton, 1999).

Adult – An Individual who has reached the age of 18 or older.

Anticipating Consequences – The process of looking forward and considering the potential consequences of an intended course of action as they may affect possible learning results (Carr, 1999).

Autonomy – The relative capacity to independently participate in experiences.

Change Skills – Refers to the capacity to consciously select correct responses to situations that arise (Meyer, 2001).

Circumstance – An acquired skill learned from one's family forming an individual's perception of fairness, orderliness, honesty, justice and their place in the world (Meyer, 2001).

Communication Skills – Refers to the ability to create an environment where a genuine sharing of ideas and feelings can exist (Meyer, 2001).

Deferred Gratification – The extent to which a person delays the immediate gratification of engaging in a more pleasurable non-learning activity in favor of a learning alternative.

Desire – A behavioral construct formed by three major factors: *Basic Freedom*, *Managing Power* and *Acquired Skill*. For purposes of learner autonomy research, it consists of seven components: circumstances, issues of expression, group identity, growth and balance, love issues, basic communication skills and basic change skills (Meyer, 2001).

Discipline – The ability to choose the best course of action without external motivation.

Dysfunctional Learner Dependence – A state in which there is a lack of balance between the relative control of the learner and others. Characterized by an inability or unwillingness to embark on learning without substantial direction. (Cofessore, G.J., 2000, p.3).

Dysfunctional Learner Independence – A state in which there is a lack of balance in the relative control of the student and others. Characterized by an unwillingness to let others participate in the student's learning process. (Confessore, G.J., 2000, p.3).

Evaluating Alternatives – The process of assessing the advantages of optional plans to determine the mode of action in regards to the learning endeavor (Carr, 1999).

Expression – An individual's ability to defend oneself, to investigate and seek information, to express oneself, to do as one wishes and to speak freely (Meyer, 2001).

Functional Learner Autonomy – A state in which there is balance between control by the student and control by others within a learning context. (Confessore, G.J. 2000, p.2).

Future Orientation – The extent to which an individual looks to future gains and rewards of learning undertaken in the present (Carr, 1999).

Goal-Directedness – The behavior of establishing goals that serve as motivators and targets for accomplishment (Ponton, 1999).

Goal Maintenance – The behavior of establishing goals that serve as motivation for action (Confessore, G.J., 2000).

Group Identity – Refers to the extent to which one perceives the family to respect and encourage the development of talents/abilities (Meyer, 2001).

Growth and Balance – Refers to the ability to bring order to one's life, to have strength of character through adversity and to exercise good judgment to consciously choose the direction of one's life (Meyer, 2001).

Initiative – A behavioral syndrome comprised of the following components: goal-directedness, action-orientation, persistence in overcoming obstacles, active approach to problem solving and self-startedness (Ponton, 1999).

Learner Autonomy – "The relative capacity to productively participate in learning experiences. This capacity consists of a range of functional learner autonomy that is bounded by two relatively dysfunctional learner states, which are dysfunctional learner dependence and dysfunctional learner independence" (Confessore, G.J., 2000, p.2).

Learning Priority – The degree to which an individual makes choices in favor of learning when in conflict with other activities (Carr, 1999).

Love Issues – Refers to the level of consciousness that allows one to experience serenity and power simultaneously (Meyer, 2001).

Overcoming Obstacles – The behavior of a learner's continual engagement in a learning activity despite the presence of impediments (Ponton, 1999).

Persistence – The behavior of continuing action in spite of the presence of obstacles or competing goals (Derrick, 2001).

Planning – Behavioral intentions that lead to prior arrangements that will factor into the achievement of a specific learning endeavor (Carr, 1999).

Resolving Conflict – The extent to which an individual makes choices in favor of learning activities when in conflict with other activities (Carr, 1999).

Resourcefulness – The behavioral syndrome of self-control skills requisite for autonomous learning. These include: prioritizing learning over other things, making choices in favor of learning when in conflict with other activities, looking to the future benefits of the learning undertaken now, and solving problems (planning, evaluating alternatives, and anticipating consequences)(Carr, 1999).

Self-Regulation – Processes that exercise control over thinking, affect, and behavior as knowledge and skills are acquired (Derrick, 2001).

Self-Startedness – Refers to the behavior of a learner motivating his or herself to begin, either initially or after a period of inactivity, a learning activity (Ponton, 1999).

Volition – The maintenance of intentional focus (the will of the individual to learn) and effort toward goals despite distractions (Derrick, 2001).

Outline of Dissertation

Chapter two reviews the literature relevant to this study. It focuses on the areas of adult learning, learner autonomy, academic performance and the issues associated with each. Particular focus is placed on the history of adult learning and how this development shapes our concept today. In addition, issues related to autonomous learning are explored such as the conditions that increase or decrease it. Finally, the area of academic performance is reviewed with attention placed on the factors impacting it – and the difficulty in measuring it.

Chapter three describes the research methodology as it applies to the research questions. It includes the sample, measurement techniques and statistical methods used to explore the meaning of the data. Chapter four will present the study findings while Chapter Five will discuss the meaning of these findings in the context of the conceptual framework and literature review.

CHAPTER 2 - LITERATURE REVIEW

Introduction

This review focuses on the literature that serves as the roots for the constructs upon which this research was founded. The first section reviews the construct of learner autonomy from its historical beginnings in the literature relating to adult learing - Houle (1961); Knowles (1968, 1980) - to research on self-directed learning - Bandura (1977); Spear & Mocker (1981); Tough (1981) – to the latest research in this area.- Long (1992); Confessore (1991, 2000).

Section two reviews the literature related to academic performance and includes definitions and factors that contribute to the relative success of adult learners in academics. It follows the major lines of though in this area: meaning and measurement (Lavin, 1965), summative vs. formative measurement (Knight, 2002), underachievement and overachievement (Emerick, 1992; Peterson & Colangelo, 1996; Whitmore, 1980), and predictors of performance (Willingham, 1985).

The literature review was conducted using numerous tools. Initially, a computer-aided search was conducted using the Washington Regional Library Consortium's (WRLC) *Alladin* database. General keywords were used such as "Adult Learning", "Learner Autonomy" and "Academic performance". However this yielded only about 35 good sources (Full text from peer-reviewed publications). Next a more specific search was conducted in the same database

using keywords such as "Andragogy", "Self-Reliance" and "Summative Assessment". These yielded an additional 20 sources. Individual databases in the Alladin tool included: ABI/Inform, Dissertation Abstracts, Educational Resource Information Center (ERIC) and JSTOR.

Next, references within these sources were reviewed for foundational research that might lead to a better understanding of the topics and issues associated with the study conceptual framework. This created an additional 15 sources including both books and articles. The library catalog for the WRLC was then used to determine the availability of the books. Those that were readily available were borrowed and read, while those that were not available were purchased where practicable.

Among the journals and publications used for this study were: *Academy of Management Journal, The Academy of Management Review, The Academy of Management Executive, The Academy of Management Learning and Education, College Student Journal, Journal of Economic Education, Administrative Science Quarterly, Journal of Organizational Behavior, Journal of Workplace Learning, Human Resource Development Quarterly, Human Resource Management Review, Guideposts to self-directed learning Human Resource Management, Public Administration Quarterly, Studies in Higher Education, Training and Development, and Leadership & Organization Development Journal.*

Learner Autonomy

Adult Learners

While researchers have been addressing the issue of adult learning since the early 1920's, according to Merriam (2001, p. 3), "…we have no single answer, no one theory or model of adult learning that explains all that we know about adult learners…"). However, she does identify two streams of thought that are most representative of adult learning theory: Andragogy and Self-Directed Learning (SDL).

Andragogy

The concept of Andragogy is rooted in the work of Houle (1961), who identified the reasons why adult's seem to pursue learning. Some, he argued, saw learning as a means to an end, while others participated in learning because of an enjoyment of the activity and interaction. Finally, some chose to learn because of an innate desire to learn for the sake of learning. While this was an important acknowledgement and discussion of the educational needs of different types of adult learners, no distinction was placed between adult and younger learners.

Knowles' (1968, 1980) made the proposition that the educational needs of adults (andragogy) are different than those of children (pedagogy). Knowles (1980, p. 43-44) distinguished adult learners from younger ones through four crucial assumptions: That adult learners are more oriented toward self-directed learning experiences; that they have a large pool of experiences to draw from; that

adults learn in order to fill a need they identify; and that adult learners seek learning to fill more immediate educational needs. Knowles concept of andragogy, however, is criticized by Merriam (2001, p. 5) as being more a set of assumptions than an actual theory of adult learning. Moreover, she points out that these assumptions are not necessarily descriptive of adults only. Many children can be self-directed learners, while many adults require heavy direction from instructors.

Self-Directed Learning

The most immediate predecessors to the construct of learner autonomy are found in the self-directed learning literature. Bandura's (1977) research on self-efficacy, Tough's (1981) focus on learning without the aid of an instructor, Spear & Mocker's (1981) research on environmental factors of self-directed learning, and Long's (1992) championing of the need for the study of self-directed learning. Each of these supporting theories are reviewed here to provide a context for the development of learner autonomy as a construct.

Bandura (1977, p. 194) defined self-efficacy as a person's own estimate of how competent he or she feels in particular environment. As a result of this confidence in their abilities, the level of reinforcement can either be direct external, self-administered, or vicarious in nature. The importance of this perspective is that the learner and environment are both accounted for and their interaction with one another is acknowledged in creating the learning experience.

Tough (1981) went a step further to try to find the extent to which adults participate in self-directed learning activities. In his research, he studied 66 Canadian adults to determine their self-directed learning process and found that this kind of learning is widespread, is part of everyday life, and is systematic (linear) despite the absence of an instructor.

Spear & Mocker (1981, p. 5) identified four learning types: formal, nonformal, informal, and self-directed. Each is distinguished from the other in terms of the learner's control over the subject matter and the process (See Figure 2, below).

Figure 2. Spear & Mocker's Learning Types.
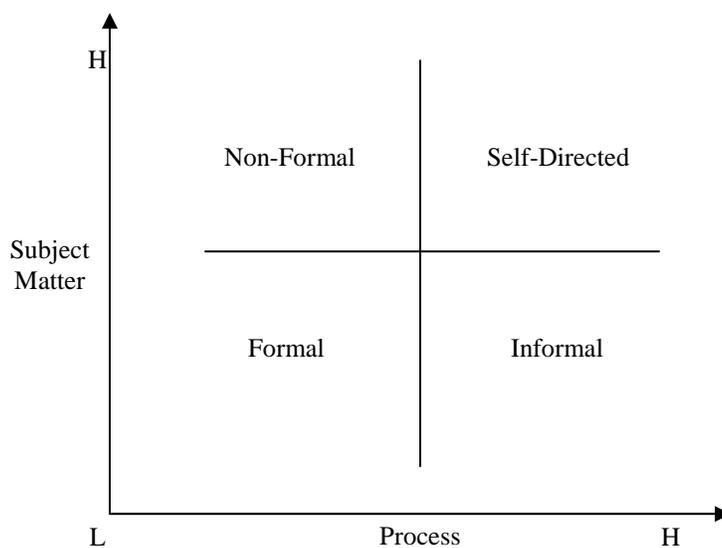
In formal learning, the learner controls neither the subject matter nor the process, while in nonformal environments, the learner controls the subject matter

but not the process. Informal learning gives the learner control over the process but not the subject, while in self-directed learning, the person controls both the subject matter and process.

Long (1992) proposed that the study of self-directed learning could best be understood by using a theoretical framework that accounted for pedagogical and psychological control (see figure 3, below). Psychological control refers to the way in which an individual assumes control for learning. Pedagogical control refers to who determines the content, scope and direction of the learning experience.

Figure 3. Long's Self-Directed Learning Framework.

```
                        PSYCH CONTROL
                           (HIGH)
                             ↑
                             |
              QUAD 1         |      QUAD 2
           (Highest SDL)     |
                             |
 ANDRAGOGY  ←————————————————+————————————————→  PEDAGOGY
                             |
              QUAD 3         |      QUAD 4
                             |   (Lowest SDL)
                             |
                             ↓
                           (LOW)
```
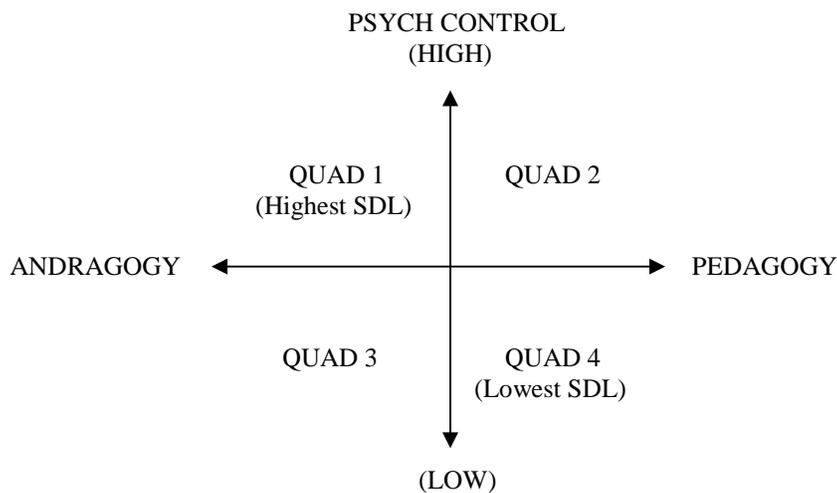
Where psychological control is high and pedagogical control is low, the highest self-directed learning is achieved. Likewise, when the amount of psychological control is low and the pedagogical control is also high, the self-directedness of the learning experience is low.

The Learner Autonomy Profile (LAP)

Confessore (1991) first introduced the concept of learner autonomy in a selection process to choose gifted high school students to participate in an early college summer arts program. In order to make the selections, he used four criteria: Desire, Resourcefulness, Initiative, and Persistence. *Desire* describes the individual's motivation to participate in a learning experience, while *resourcefulness* means the learner's intention to be resourceful. *Initiative* describes the person's willingness to initiate learning and *persistence* describes the person's intention to continue learning activities.

These four criteria later became the four components of a learner autonomy construct that could be measured with the use of an instrument Confessore developed called the Learning Profile Questionnaire (LPQ). Confessore & Confessore (1994) then conducted a series of research studies aimed at solidifying the connection between learner autonomy and the four components.

This was followed by development of separate instruments to test each component (Carr, 1999; Ponton, 1999; Derrick, 2001 and Meyer (2001). When

combined, these separate instruments form a Learner Autonomy Profile (LAP) that seeks to understand a learner's behavioral intentions rather than simply their observed actions.

Academic performance

Academic Performance

Academic performance has been a central issue in education throughout recorded history (Plato, Apology, 399 B.C.). While it is daunting to try to make sense of all the literature in this area, the dialogue tends to be centered along four major themes: (1) meaning and measurement, (2) summative vs. formative measurement, (3) underachievement and overachievement, and (4) predictors of performance. This section seeks to review the issues centered on these themes.

Meaning & Measurement

Lavin (1965, p. 18) provides a useful definition of the term academic performance: "As traditionally used, the term 'academic performance' refers to some method of expressing a student's scholastic standing. Usually this is a grade for a course, an average for a group of courses in a subject area, or an average for all courses expressed on a 0-to-100 or other quantitative scale."

How performance is measured is one of the most important and volatile discussions in academics. While "academic ability is the most important explanatory variable in studies of student learning, researchers control for it with a wide array and combination of proxies." (Grove, Wasserman and Grodner,

2006). These proxies include: GPA, class rank, SAT, ACT and literally hundreds of other standard measures that purport to demonstrate ability. The most popular of these is GPA and SAT scores. While these proxies help to point toward who will perform academically, they still only account for a small fraction of the variability (Tross et al., 2000) in academic performance.

Summative vs. Formative Assessment

Knight (2002) tackled the issue of whether assessments should be summative vs. formative. His article defined summative assessment as "When assessment certifies or warrants achievement it has a feedout function, in that the grades and classifications can then be treated as a performance indicator for the student, department, institution, employer, funding body, quality agency or compilers of league tables. So important are those feedout functions that such assessment is often called high stakes or summative assessment, and greater emphasis is consequently put on making it robust."

Underachievement and Overachievement

While academic underachievement is a frequent topic in education, there is no uniform definition or standard for it. Most researchers agree, though, that academic underachievement is a disparity between potential and actual performance (Emerick, 1992; Peterson & Colangelo, 1996; Whitmore, 1980). Lavin (1965, p. 28) described a framework for discussing the relatively subjective terms of underachievement and overachievement (see Chart 1, below).

Chart 1: Types of Scholastic Performance at Different Ability Levels

High Ability	Pronounced Underachievement	Underachievement	Performance Equal to Capacity
	Underachievement	Performance Equal to Capacity	Overachievement
Low Ability	Performance Equal to Capacity	Overachievement	Pronounced Overachievement

Low ←---→ High

Performance

Other factors that may influence achievement include life satisfaction (Rode et al, 2005), socioeconomic status (Braunstein, McGrath and Pescatrice, 2000), Intelligence (Wedemyer, 1953; Argyris, 1991) and Personality (Tross, et al, 200; DeBerard et al., 2004).

Prediction of Performance

Problems with Prediction

While standardized test scores and past academic performance have been noted to be the best predictors of college achievement (Shivpuri, et. al., 2006), there are some significant problems associated with them. A review of the achievement literature by Mouw & Khanna (1993) found that these measures have an R^2 value less than .25 – leaving a great deal of unexplained variance in collegiate academic performance.

Willingham (1985, p. 179) had this to say about trying to predict academic performance: "The two traditional academic predictors, high school rank (HSR) and admissions test score (SAT), were by far the best at forecasting the scholastic types of achievement. In a comparison of the two, HSR was a somewhat better predictor of college honors (based on cumulative grade average), while the SAT was a somewhat better predictor of departmental honors. The latter were based on independent scholarship, arguably more characteristic of preprofessional work in the discipline than is grade point average."

Intellectual Predictors

While intelligence is strongly correlated with academic performance, it is often the case that potential does not translate to success. Indeed, up to 30% of gifted students are at risk for failure, while nearly half are not working to their full potential.

Though discussion over the nature of human intelligence has been going on since Plato and Aristotle, the systematic research of intelligence began in the mid-19th century with the pioneering work of Sir Francis Galton. In his book *Hereditary Genius* (1869) he observed that traits we would attribute with "smart" people appeared to be passed from generation to generation. Galton founded what has come to be called the London School (focused on determining the "why" of intelligence) and is contrasted with the French School, founded by Alfred Binet, which was focused on the "what" of intelligence.

Binet is famous for developing his groundbreaking test of intelligence and for the observation that individuals who perform well on certain tests of cognitive ability generally tend to excel on others as well. This led some to posit that there was a general factor of intelligence (g) that lay behind these abilities (Spearman, 1904). General cognitive ability is seen as the best predictor of future success in academic and professional endeavors (Jensen, 1998; Gustafson, 1999; and Plomin, 1999).

An interesting topic in the study of cognition is the concept of Boolean or K-Complexity in which the ability to attack complex problems is tied to the process by which the individual's brain operates (Chater, 2000). Proponents of this theory suggest that higher K (for Kolmorov) complexity results in the recruitment of different methods for processing information. For example, a decision-making exercise may require one to way three or four elements before deciding. This becomes a simple Boolean statement of A+B+C+D vs. some variation on that theme such as A+B+C, but not D.

Personality Predictors

Recently, more focus has begun to be placed on the role of personality in predicting academic performance. Tross et al (2000) focused on three personality factors: Achievement, Conscientiousness and resiliency. Achievement was defined as "The Tendency to strive for competence in one's work, to improve on one's past performance, to succeed." Conscientiousness was seen as "The

tendency to carry out tasks in a careful manner until their completion." Finally, resiliency was defined as "The tendency to demonstrate commitment to a course of action when challenged, remain calm and emotionally stable." It is interesting to note how much these definitions are in line with the terminology used in the Learner Autonomy literature (Confessore, 1991) to show the intentions of learners. Tross et al found that of these, conscientiousness was the most closely correlated with performance (pp 329).

Purkey (1970, p. 14) notes: "For generations, wise teachers have sensed the significant and positive relationship between a student's concept of himself and his performance in school. They believed that the students who feel good about themselves and their abilities are the ones who are most likely to succeed."

Summary

While the concept of learner autonomy may be a relatively new addition to the canon of adult learning theory, it is founded upon a solid foundation of theory: Houle (1961); Knowles (1968, 1980), Bandura (1977); Spear & Mocker (1981); Tough (1981) and Long (1992). LA represents an important factor to consider when conducting research in adult learning – and potentially in predicting academic performance.

The academic performance literature currently follows four major lines of thought: meaning and measurement (Lavin, 1965), summative vs. formative

measurement (Knight, 2002), underachievement and overachievement (Emerick, 1992; Peterson & Colangelo, 1996; Whitmore, 1980), and predictors of performance (Willingham, 1985). While the research in this are has traditionally focused on measurement (GPA, SAT, etc.) it is increasingly moving toward inclusion of socio-economic and personality factors. This has been driven mostly by the failure of traditional methods to provide an explanation for the variance found in predictive models (Tross et al, 2000).

Chapter 3 will present the research design, data collection and data analysis utilized in this study.

CHAPTER 3 – METHODS

Overview of Methodology

This study used an empirical approach to investigate the relationship between Learner Autonomy and academic performance in adult learners enrolled at a university in the Washington, D.C. metropolitan area. The level of LA was determined by using the Learner Autonomy Profile (LAP), while academic performance was determined by cumulative GPA.

Creswell (2003) described the recent development and strategies involved with the quantitative approach to research: "During the late 19th century and throughout the 20th, strategies of inquiry associated with quantitative research were those that invoked the postpositivist perspectives. These include the true experiments and the less rigorous experiments called quasi-experimental and correlational studies…more recently, quantitative strategies involved complex experiments with many variables and treatments (e.g. factorial designs and repeated measure designs). They also included elaborate structural equation models that incorporated causal paths and the identification of the collective strength of multiple variables."

Research Question and Hypotheses

According to Creswell (2003), in good quantitative research questions and hypotheses, "the use of variables…is typically limited to three basic approaches: the researcher may *compare* groups on an independent variable to see its impact

on a dependent variable. Alternatively, the investigator may *relate* one or more independent variables to a dependent variable. Third, the researcher may *describe* responses to the independent, mediating, or dependent variables."

The central question of this study was: What is the correlation between Learner Autonomy and academic performance in adult learners, as measured by the main and subscales of the Learner Autonomy Profile (LAP)?

*Hypotheses***:**

Hypothesis 1: There is a significant correlation between the *Learner Desire* construct score of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1a. There is a significant correlation between the *Circumstance component* score of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1b. There is a significant correlation between the *Expression component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1c. There is a significant correlation between the *Group Identity component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1d. There is a significant correlation between the *Growth and Balance component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1e. There is a significant correlation between the *Love Issues component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1f. There is a significant correlation between the *Communication Skills component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1g. There is a significant correlation between the *Change Skills component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

Hypothesis 2: There is a significant correlation between the *Learner Initiative* construct score of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

2a. There is a significant correlation between the *Goal-Directedness component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

2b. There is a significant correlation between the *Action-Orientation component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

2c. There is a significant correlation between the *Overcoming Obstacles component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

2d. There is a significant correlation between the *Active-Approach component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

2e. There is a significant correlation between the *Self-Starting component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

Hypothesis 3: There is a significant correlation between the *Learner Persistence construct score* of the Learner Autonomy Profile-Short Form and academic performance as measure by college GPA.

3a. There is a significant correlation between the *Volition component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

3b. There is a significant correlation between the *Self-Regulation component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

3c. There is a significant correlation between the *Goal-Maintenance component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

Hypothesis 4: There is a significant correlation between the *Learner Resourcefulness* construct score of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4a. There is a significant correlation between the *Learning Priority component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4b. There is a significant correlation between the *Deferring Gratification component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4c. There is a significant correlation between the *Resolving Conflict component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4d. There is a significant correlation between the *Future Orientation component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4e. There is a significant correlation between the *Planning component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4f. There is a significant correlation between the *Evaluating Alternatives component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4g. There is a significant correlation between the *Anticipating Consequences component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

Hypothesis 5: There is a significant correlation between the *Total* score of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA

Research Design

In this correlational study, participants' scores received on the LAP main and subscales were treated as dependent variables and their cumulative GPAs were treated as independent variables.

Population and Sampling

According to Creswell (2003), the population and sample portion of a quantitative research study should address the following components:

- Identify the population in the study

- Identify whether the sampling design for this population is single or multi-stage (called clustering)

- Identify the selection process for individuals

- Identify whether the study will involve stratification of the population before selecting the sample

- Discuss the procedure for selecting the sample from available lists

- Indicate the number of people in the sample and the procedure used to compute this number

Population

The population of interest for this study was adult learners attending a formal educational institution such as a college or university. It consisted of 125 adult learners enrolled at a university in the Washington, D.C. metropolitan area.

Sample Frame

Alreck and Settle (2004) define sampling as "the number and/or identification of respondents in the population who will be or have been included in the survey". This section will describe how the sample frame will be identified and addressed.

Data Collection Procedures

The Learner Autonomy Profile was administered online to study participants. Once potential participants were recruited, a letter was sent to them with instructions and an informed consent form. When participants signed and returned the IRB required consent form, an ID# and password were assigned to them so that they could access the online instrument. When participants accessed the instrument, demographic data, including cumulative GPA was collected to inform the study.

Instrumentation

With regard to selecting and describing instrumentation, Creswell (2003) recommends that the researcher consider the following:

- Name the survey instrument used to collect data in the research study

- To use an existing instrument, describe the established validity and reliability of scores obtained from past use of the instrument

- Include sample items from the instrument so that readers can see the actual items used

- Indicate the major content sections in the instrument, such as the cover letter…the items (e.g. demographics, attitudinal items, behavioral items, factual items), and the closing instructions

- Discuss plans for pilot testing or field testing the survey and provide a rationale for these plans

- For a mailed survey, identify steps for administering the survey and for following up to ensure a high response rate

Data for this study was primarily be gathered via the LAP instrument. The LAP has 22 components that are centered around four constructs: desire, resourcefulness, initiative, and persistence. Desire to learn describes the individual's motivation to participate in a learning experience, while resourcefulness means the learner's intention to be resourceful.

Initiative describes the person's willingness to initiate learning and persistence describes the person's intention to continue learning activities. Taken together, these four scales provide an accurate assessment of an individual's relative capacity to undertake a self-directed learning experience.

Reliability & Validity

Reliability and validity of the four scales of the LAP instrument have been determined through principal component analysis, Pearson's Correlations, and calculation of Cronbach's Alphas through a test-retest design. The first construct, desire, had an alpha of .9376 with the second, resourcefulness, having an alpha of .9644. The third construct, initiative, had an alpha of .9593, and the final construct, persistence, had an alpha of .9677.

Data Analysis

When LAP scores and GPAs had been collected for the study participants, the data was prepared and an analysis was conducted to determine the correlation between LA and AA. This section will first describe the preliminary data handling in terms of data editing, data entry, and finally data transformations. I will then detail the analysis of the data that was collected.

Preliminary Data Handling

Data Edits

Data editing was fairly easy, as I was using an online instrument to gather data from participants. The Learner Autonomy Profile (LAP) could be accessed when participants provide their study ID number and password that was assigned by me. However, data still needed to be reviewed to ensure that all fields had been entered with valid responses, and that the participant had answered all items on the short form version of the LAP.

Data Entry Procedures

Data entry was accomplished using the data and variable views of the SPSS statistics package (Ver. 11.5). The variables were set up first with the study ID number being a string variable and the participants LAP score and GPA being numeric variables. Once the variables have been set up, I switched to the data view and entered data for the 66 items of the short form LAP.

Data Transformations

Some items in the LAP require a positive response, while others require a negative response. With this in mind, and using the data transformation function in the SPSS statistical package, I "flipped" the responses so that all of them were "in the same direction".

Data Analysis

Alreck and Settle (2004) define data analysis as "the manipulation of numbers, letters, or symbols in order to suppress the detail and reveal the relevant facts or relationships". In order to make sense of the data, I used a correlational study to determine the relationship between learner autonomy and academic performance in the population that I studied. The purpose of using this type of data analysis was in part due to the nature of my research question, but also because of the manner in which data were collected. My research question specifically stated: "Is learner autonomy correlated with academic performance" which calls for a correlational approach. Also, the data was collected using an instrument that provided a numeric indicator of the level of autonomy in a learner. As such, when analyzed with academic performance, it begs for a correlational view of the relationship between them.

Correlation Analysis

The test that was conducted on the data was a simple correlational comparison of the LA and AA variables (Pearson Correlation). However, "when

one continuous variable can be identified as an independent variable and another continuous variable as the dependent variable, regression analysis is the appropriate technique to measure the relationship between them and assess its significance" (Alreck & Settle, 1994, p. 315-319).

Therefore, I also determined the r-square for the relationship in order to "measure the degree and direction of influence the independent variable has on the dependent variable." (p. 319).

Demographic Data

To provide adequate data for this study, demographic information was collected in addition to LAP scores. This data gram included name, sex, city, state, and GPA.

Human Participants and Ethics Precautions

According to Creswell (2003) a researcher needs to consider a number of elements when undertaking a study. Specifically, he admonishes that one must do the following:

- Do not put participants at risk, and respect vulnerable populations

- Researchers need to respect the research site so that the sites are left undisturbed after a research study

- In experimental studies, investigators need to collect data so that all participants, and not only a experimental group, benefit from the treatments

- Researchers also need to anticipate the possibility of harmful information being disclosed during the data collection process

Participants in this study were protected in a number of ways. First, the administration of the LAP was conducted online so that those taking the instrument, and those grading it, did not meet. In addition, prior to using the online instrument, participants were assigned a code to use and were not required to furnish their name.

Once participants used the instrument, only the researcher had access to the data and the list of participants and scores were kept in separate locations to prevent unauthorized viewing or use.

CHAPTER FOUR: RESULTS

Overview

This chapter presents the results of the study techniques used to analyze the data and answer the research question. It begins with instrumentation and a restatement of the research question and hypotheses and is followed by the descriptive statistics for the study. Following the presentation of the results of hypotheses testing, a final summary of the study results concludes the chapter.

The central question of this study was: What is the correlation between Learner Autonomy and academic performance in adult learners, as measured by the constructs and components of the Learner Autonomy Profile-Short Form-Short Form (LAP-SF-SF)? Whether the correlation was positive or negative was not a part of the question, however it is noted in the results in order to provide a complete picture of the results.

Instrumentation

Data for this study was gathered via the Learner Autonomy Profile-Short Form (LAP-SF) instrument. The LAP-SF has four constructs and 22 components that are centered around four constructs: desire, resourcefulness, initiative, and persistence. Desire describes the individual's motivation to while resourcefulness means the learner's intention to be resourceful. Initiative describes the person's willingness to initiate learning and persistence describes the person's intention to continue learning activities. Taken together, these four constructs provide an

accurate assessment of an individual's relative capacity to undertake a self-directed learning experience. Since the instrument has 66 questions, describe how many questions are there per construct and component and give examples of questions for each – include this part in your methodology section, too.

Reliability and validity of the four constructs and 22 components of the LAP-SF instrument have been determined [by whom? (use citations) – include this part in your methodology section, too.] through principal component analysis, Pearson's Correlations, and calculation of Cronbach's Alphas through a test-retest design. The first construct, desire, had an alpha of .9376 with the second, resourcefulness, having an alpha of .9644. The third construct, initiative, had an alpha of .9593, and the final construct, persistence, had an alpha of .9677.

The following hypotheses were examined to inform the research question:

Hypothesis 1: There is a significant correlation between the *Learner Desire* construct score of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1a. There is a significant correlation between the *Circumstance component* score of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1b. There is a significant correlation between the *Expression component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1c. There is a significant correlation between the *Group Identity component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1d. There is a significant correlation between the *Growth and Balance component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1e. There is a significant correlation between the *Love Issues component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1f. There is a significant correlation between the *Communication Skills component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

1g. There is a significant correlation between the *Change Skills component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

Hypothesis 2: There is a significant correlation between the *Learner Initiative* construct score of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

2a. There is a significant correlation between the *Goal-Directedness component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

2b. There is a significant correlation between the *Action-Orientation component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

2c. There is a significant correlation between the *Overcoming Obstacles component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

2d. There is a significant correlation between the *Active-Approach component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

2e. There is a significant correlation between the *Self-Starting component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

Hypothesis 3: There is a significant correlation between the *Learner Persistence construct score* of the Learner Autonomy Profile-Short Form and academic performance as measure by college GPA.

3a. There is a significant correlation between the *Volition component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

3b. There is a significant correlation between the *Self-Regulation component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

3c. There is a significant correlation between the *Goal-Maintenance component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

Hypothesis 4: There is a significant correlation between the *Learner Resourcefulness* construct score of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4a. There is a significant correlation between the *Learning Priority component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4b. There is a significant correlation between the *Deferring Gratification component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4c. There is a significant correlation between the *Resolving Conflict component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4d. There is a significant correlation between the *Future Orientation component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4e. There is a significant correlation between the *Planning component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4f. There is a significant correlation between the *Evaluating Alternatives component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

4g. There is a significant correlation between the *Anticipating Consequences component score* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.

Hypothesis 5: There is a significant correlation between the *Total* score of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA

Response Rate

For this study, all 334 student organizations at The George Washington University were contacted in order to recruit subjects. Additionally, 2,348 individual students were contacted via the GWU student e-mail system for a total of 2,682 potential participants. Students were contacted randomly by e-mail until enough had completed the instrument. As a result of these efforts, a total of 264 students contacted the researcher and volunteered to participate. Of these, 191 registered for the study with a total of 138 actually completing the online LAP-SF instrument. Three participants did not provide a GPA and were not considered in the study. Table 1, below, summarizes the response to the recruitment effort.

Students Contacted	2682	100%
Volunteered to Take Online Instrument	264	9.80%
Completely Registered for Online Instrument	191	7.10%
Completed Online Instrument	135	5.00%

Table 1: Response Summary

Descriptive Statistics

This section describes the students that participated in the study. In terms of gender, the study participants included 59 male (43.7%) and 76 female (56.3%) students (Table 2). The participants ranged in age from 17 to 67 with the mean age being just under 28 years old (Table 3). In terms of marital status, 96 (71.1%)

were single while 39 (28.9%) were not single (Table 4). Finally, 50 of the participants (37%) identified high school as their highest education completed; 48 (35.6%) had earned a bachelor's degree; and 37 (27.4%) had earned a graduate or professional degree (Table 5).

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	59	43.7	43.7	43.7
	Female	76	56.3	56.3	100.0
	Total	135	100.0	100.0	

Table 2 – Gender

Age

	N	Minimum	Maximum	Mean	Std. Deviation
Age	135	17	67	27.97	10.978
Valid N (listwise)	135				

Table 3 – Age

Domestic Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	96	71.1	71.1	71.1
	Not Single	39	28.9	28.9	100.0
	Total	135	100.0	100.0	

Table 4 – Domestic Status

Education Completed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High School Diploma	50	37.0	37.0	37.0
	Batchelor Degree	48	35.6	35.6	72.6
	Graduate or Professional Degree	37	27.4	27.4	100.0
	Total	135	100.0	100.0	

Table 5 – Education Completed

Results of Hypotheses Testing

Learner Desire

Table 6 reveals that there is a positive, significant correlation between the Learner Desire construct of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 7 reveals that the value of R^2 is .037 meaning that the Learner Desire construct and GPA share 3.7% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Learner Desire

		Grade Point Average	Short Form Desire Score
Grade Point Average	Pearson Correlation	1.000	.193[*]

	Sig. (2-tailed)		.025
	N	135.000	135
Short Form Desire Score	Pearson Correlation	.193[*]	1.000
	Sig. (2-tailed)	.025	
	N	135	135.000

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

Table 6 – GPA and Learner Desire Construct (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.193[a]	.037	.030	.36903

a. Predictors: (Constant), Short Form Desire Score

Table 7 – GPA and Learner Desire Construct (R^2)

Circumstance

Table 8 reveals that there is a positive, but not significant correlation between the Circumstance Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 9 reveals that the value of R^2 is .022 meaning that the Circumstance Component and GPA share 2.2% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Circumstance

		Grade Point Average	Circumstance
Grade Point Average	Pearson Correlation	1.000	.147
	Sig. (2-tailed)		.089
	N	135.000	135
Circumstance	Pearson Correlation	.147	1.000
	Sig. (2-tailed)	.089	
	N	135	135.000

Table 8 – GPA and Circumstance Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.147[a]	.022	.014	.37205

a. Predictors: (Constant), Circumstance

Table 9 – GPA and Circumstance Component (R^2)

Expression

Table 10 reveals that there is a positive, but not significant correlation between the Expression Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 11 reveals that the value of R^2 is .003 meaning that the Expression Component and GPA share 0.3% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Expression

		Grade Point Average	Expression
Grade Point Average	Pearson Correlation	1.000	.056
	Sig. (2-tailed)		.517
	N	135.000	135
Expression	Pearson Correlation	.056	1.000
	Sig. (2-tailed)	.517	
	N	135	135.000

Table 10 – GPA and Expression Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.056[a]	.003	-.004	.37553

a. Predictors: (Constant), Expression

Table 11 – GPA and Expression Component (R^2)

Group Identity

Table 12 reveals that there is a positive, significant correlation between the Group Identity Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 13 reveals that the value of R^2 is .040 meaning that the Group Identity Component and GPA share 4% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the

appropriate technique to measure the relationship between variables and assess their significance.

Group Identity

		Grade Point Average	Group Identity
Grade Point Average	Pearson Correlation	1.000	.200*
	Sig. (2-tailed)		.020
	N	135.000	135
Group Identity	Pearson Correlation	.200*	1.000
	Sig. (2-tailed)	.020	
	N	135	135.000

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

Table 12 – GPA and Group Identity Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.200[a]	.040	.033	.36854

a. Predictors: (Constant), Group Identity

Table 13 – GPA and Group Identity Component (R^2)

Growth & Balance

Table 14 reveals that there is a positive, significant correlation between the Growth and Balance Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 15 reveals that the value of R^2 is .038 meaning that the Growth & Balance Component and GPA share 3.8% of the

variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Growth and Balance

		Grade Point Average	Growth & Balance
Grade Point Average	Pearson Correlation	1.000	.194[*]
	Sig. (2-tailed)		.024
	N	135.000	135
Growth & Balance	Pearson Correlation	.194[*]	1.000
	Sig. (2-tailed)	.024	
	N	135	135.000

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

Table 14 – GPA and Growth & Balance Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.194[a]	.038	.031	.36895

a. Predictors: (Constant), Growth & Balance

Table 15 – GPA and Growth & Balance Component (R^2)

Love Issues

Table 16 reveals that there is a positive, but not significant correlation between the Love Issues Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 17 reveals that the value of R^2 is .004

meaning that the Love Issues Component and GPA share 0.4% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Love Issues

		Grade Point Average	Love Issues
Grade Point Average	Pearson Correlation	1.000	.062
	Sig. (2-tailed)		.476
	N	135.000	135
Love Issues	Pearson Correlation	.062	1.000
	Sig. (2-tailed)	.476	
	N	135	135.000

Table 16 – GPA and Love Issues Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.062[a]	.004	-.004	.37541

a. Predictors: (Constant), Love Issues

Table 17 – GPA and Love Issues Component (R^2)

Communication Skills

Table 18 reveals that there is a positive, significant correlation between the Communication Skills Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 19 reveals that the value of R^2 is .043 meaning that the Communication Skills Component and GPA share 4.3% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Communication Skills

		Grade Point Average	Communication Skills
Grade Point Average	Pearson Correlation	1.000	.208[*]
	Sig. (2-tailed)		.015
	N	135.000	135
Communication Skills	Pearson Correlation	.208[*]	1.000
	Sig. (2-tailed)	.015	
	N	135	135.000

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

Table 18 – GPA and Communication Skills Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.208[a]	.043	.036	.36789

a. Predictors: (Constant), Communication Skills

Table 19 – GPA and Communication Skills Component (R^2)

Change Skills

Table 20 reveals that there is a positive, but not significant correlation between the Change Skills Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 21 reveals that the value of R^2 is .018 meaning that the Change Skills Component and GPA share 1.8% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Change Skills

		Grade Point Average	Change Skills
Grade Point Average	Pearson Correlation	1.000	.136
	Sig. (2-tailed)		.116
	N	135.000	135
Change Skills	Pearson Correlation	.136	1.000
	Sig. (2-tailed)	.116	
	N	135	135.000

Table 20 – GPA and Change Skills Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.136[a]	.018	.011	.37264

a. Predictors: (Constant), Change Skills

Table 21 – GPA and Change Skills Component (R^2)

Learner Initiative

Table 22 reveals that there is a positive, significant correlation between the Learner Initiative Construct of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 23 reveals that the value of R^2 is .034 meaning that the Learner Initiative Component and GPA share 3.4% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Learner Initiative

		Grade Point Average	Short Form Initiative Score
Grade Point Average	Pearson Correlation	1.000	.186[*]
	Sig. (2-tailed)		.031
	N	135.000	135
Short Form Initiative Score	Pearson Correlation	.186[*]	1.000

		Sig. (2-tailed)	.031	
		N	135	135.000

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

Table 22 – GPA and Learner Initiative Construct (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.186[a]	.034	.027	.36960

a. Predictors: (Constant), Short Form Initiative Score

Table 23 – GPA and Learner Initiative Construct (R^2)

Goal-Directedness

Table 24 reveals that there is a positive, but not significant correlation between the Goal Directedness Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 25 reveals that the value of R^2 is .016 meaning that the Goal Directedness Component and GPA share 1.6% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Goal Directedness

		Grade Point Average	Goal-Directedness
Grade Point Average	Pearson Correlation	1.000	.126

	Sig. (2-tailed)		.144
	N	135.000	135
Goal-Directedness	Pearson Correlation	.126	1.000
	Sig. (2-tailed)	.144	
	N	135	135.000

Table 24 – GPA and Goal-Directedness Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.126[a]	.016	.009	.37312

a. Predictors: (Constant), Goal-Directedness

Table 25 – GPA and Goal-Directedness Component (R^2)

Action Orientation

Table 26 reveals that there is a positive, significant correlation between the Action Orientation Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 27 reveals that the value of R^2 is .062 meaning that the Action Orientation Component and GPA share 6.2% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Action Orientation

		Grade Point Average	Action Orientation
Grade Point Average	Pearson Correlation	1.000	.248[**]
	Sig. (2-tailed)		.004
	N	135.000	135
Action Orientation	Pearson Correlation	.248[**]	1.000
	Sig. (2-tailed)	.004	
	N	135	135.000

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

Table 26 – GPA and Action Orientation Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.248[a]	.062	.055	.36436

a. Predictors: (Constant), Action Orientation

Table 27 – GPA and Action Orientation Component (R^2)

Overcoming Obstacles

Table 28 reveals that there is a positive, but not significant correlation between the Overcoming Obstacles Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 29 reveals that the value of R^2 is .006 meaning that the Overcoming Obstacles Component and GPA share 0.6% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Overcoming Obstacles

		Grade Point Average	Overcoming Obstacles
Grade Point Average	Pearson Correlation	1.000	.077
	Sig. (2-tailed)		.377
	N	135.000	135
Overcoming Obstacles	Pearson Correlation	.077	1.000
	Sig. (2-tailed)	.377	
	N	135	135.000

Table 28 – GPA and Overcoming Obstacles Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.077[a]	.006	-.002	.37502

a. Predictors: (Constant), Overcoming Obstacles

Table 29 – GPA and Overcoming Obstacles Component (R^2)

Active Approach

Table 30 reveals that there is a positive, but not significant correlation between the Active Approach Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 31 reveals that the value of R^2 is .022 meaning that the Active Approach Component and GPA share 2.2% of the variance between themselves. According to Alreck & Settle (1994, p. 319)

regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Active Approach

		Grade Point Average	Active Approach
Grade Point Average	Pearson Correlation	1.000	.149
	Sig. (2-tailed)		.085
	N	135.000	135
Active Approach	Pearson Correlation	.149	1.000
	Sig. (2-tailed)	.085	
	N	135	135.000

Table 30 – GPA and Active Approach Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.149[a]	.022	.015	.37193

a. Predictors: (Constant), Active Approach

Table 31 – GPA and Active Approach Component (R^2)

Self-Starting

Table 32 reveals that there is a positive, but not significant correlation between the Self-Starting Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 33 reveals that the value of R^2 is .028

meaning that the Self-Starting Component and GPA share 2.8% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Self-Starting

		Grade Point Average	Self-Starting
Grade Point Average	Pearson Correlation	1.000	.169
	Sig. (2-tailed)		.051
	N	135.000	135
Self-Starting	Pearson Correlation	.169	1.000
	Sig. (2-tailed)	.051	
	N	135	135.000

Table 32 – GPA and Self-Starting Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.169[a]	.028	.021	.37075

a. Predictors: (Constant), Self-Starting

Table 33 – GPA and Self-Starting Component (R^2)

Learner Persistence

Table 34 reveals that there is a positive, significant correlation between the Learner Persistence Construct of the Learner Autonomy Profile-Short Form and

Grade Point Average while Table 35 reveals that the value of R^2 is .040 meaning that the Learner Persistence Construct and GPA share 4% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Learner Persistence

		Grade Point Average	Short Form Persistence Score
Grade Point Average	Pearson Correlation	1.000	.200[*]
	Sig. (2-tailed)		.020
	N	135.000	135
Short Form Persistence Score	Pearson Correlation	.200[*]	1.000
	Sig. (2-tailed)	.020	
	N	135	135.000

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

Table 34 – GPA and Learner Persistence Construct (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.200[a]	.040	.033	.36850

a. Predictors: (Constant), Short Form Persistence Score

Table 35 – GPA and Learner Persistence Construct (R^2)

Volition

Table 36 reveals that there is a positive, but not significant correlation between the Volition Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 37 reveals that the value of R^2 is .020 meaning that the Volition Component and GPA share 2% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Volition

		Grade Point Average	Volition
Grade Point Average	Pearson Correlation	1.000	.140
	Sig. (2-tailed)		.105
	N	135.000	135
Volition	Pearson Correlation	.140	1.000
	Sig. (2-tailed)	.105	
	N	135	135.000

Table 36 – GPA and Volition Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.140[a]	.020	.012	.37241

a. Predictors: (Constant), Volition

Table 37 – GPA and Volition Component (R^2)

Self-Regulation

Table 38 reveals that there is a positive, significant correlation between the Self-Regulation Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 39 reveals that the value of R^2 is .073 meaning that the Self-Regulation Component and GPA share 7.3% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Self-Regulation

		Grade Point Average	Self-Regulation
Grade Point Average	Pearson Correlation	1.000	.270[**]
	Sig. (2-tailed)		.002
	N	135.000	135
Self-Regulation	Pearson Correlation	.270[**]	1.000
	Sig. (2-tailed)	.002	
	N	135	135.000

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

Table 38 – GPA and Self-Regulation Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.270[a]	.073	.066	.36212

a. Predictors: (Constant), Self-Regulation

Table 39 – GPA and Self-Regulation Component (R^2)

Goal-Maintenance

Table 40 reveals that there is a positive, but not significant correlation between the Goal-Maintenance Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 41 reveals that the value of R^2 is .019 meaning that the Goal-Maintenance Component and GPA share 1.9% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Goal Maintenance

		Grade Point Average	Goal Maintenance
Grade Point Average	Pearson Correlation	1.000	.138
	Sig. (2-tailed)		.110
	N	135.000	135
Goal Maintenance	Pearson Correlation	.138	1.000
	Sig. (2-tailed)	.110	
	N	135	135.000

Table 40 – GPA and Goal-Maintenance Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	.138[a]	.019	.012	.37253

a. Predictors: (Constant), Goal Maintenance

Table 41 – GPA and Goal Maintenance Component (R^2)

Learner Resourcefulness

Table 42 reveals that there is a positive, significant correlation between the Learner Resourcefulness Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 43 reveals that the value of R^2 is .063 meaning that the Learner Resourcefulness Component and GPA share 6.3% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Learner Resourcefulness

		Grade Point Average	Short Form Resourcefulness Score
Grade Point Average	Pearson Correlation	1.000	.251[**]
	Sig. (2-tailed)		.003
	N	135.000	135
Short Form Resourcefulness Score	Pearson Correlation	.251[**]	1.000
	Sig. (2-tailed)	.003	
	N	135	135.000

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

Table 42 – GPA and Learner Resourcefulness Construct (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.251[a]	.063	.056	.36407

a. Predictors: (Constant), Short Form Resourcefulness Score

Table 43 – GPA and Learner Resourcefulness Construct (R^2)

Learning Priority

Table 44 reveals that there is a positive, but not significant correlation between the Learning Priority Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 45 reveals that the value of R^2 is .019 meaning that the Learning Priority Component and GPA share 1.9% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Learning Priority

		Grade Point Average	Learning Priority
Grade Point Average	Pearson Correlation	1.000	.136
	Sig. (2-tailed)		.115
	N	135.000	135
Learning Priority	Pearson Correlation	.136	1.000
	Sig. (2-tailed)	.115	

Learning Priority

		Grade Point Average	Learning Priority
Grade Point Average	Pearson Correlation	1.000	.136
	Sig. (2-tailed)		.115
	N	135.000	135
Learning Priority	Pearson Correlation	.136	1.000
	Sig. (2-tailed)	.115	
	N	135	135.000

Table 44 – GPA and Learning Priority Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.136[a]	.019	.011	.37262

a. Predictors: (Constant), Learning Priority

Table 45 – GPA and Learning Priority Component (R^2)

Deferring Gratification

Table 46 reveals that there is a positive, significant correlation between the Deferring Gratification Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 47 reveals that the value of R^2 is .065 meaning that the Deferring Gratification Component and GPA share 6.5% of the variance between themselves. According to Alreck & Settle (1994, p. 319)

regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Deferring Gratification

		Grade Point Average	Deferring Gratification
Grade Point Average	Pearson Correlation	1.000	.255[**]
	Sig. (2-tailed)		.003
	N	135.000	135
Deferring Gratification	Pearson Correlation	.255[**]	1.000
	Sig. (2-tailed)	.003	
	N	135	135.000

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

Table 46 – GPA and Deferring Gratification Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.255[a]	.065	.058	.36365

a. Predictors: (Constant), Deferring Gratification

Table 47 – GPA and Deferring Gratification Component (R^2)

Resolving Conflict

Table 48 reveals that there is a positive, significant correlation between the Resolving Conflict Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 49 reveals that the value of R^2 is .067 meaning that the Resolving Conflict Component and GPA share 6.7% of the variance

between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Resolving Conflict

		Grade Point Average	Resolving Conflict
Grade Point Average	Pearson Correlation	1.000	.259[**]
	Sig. (2-tailed)		.002
	N	135.000	135
Resolving Conflict	Pearson Correlation	.259[**]	1.000
	Sig. (2-tailed)	.002	
	N	135	135.000

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

Table 48 – GPA and Resolving Conflict Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.259[a]	.067	.060	.36327

a. Predictors: (Constant), Resolving Conflict

Table 49 – GPA and Resolving Conflict Component (R^2)

Future Orientation

Table 50 reveals that there is a positive, significant correlation between the Future Orientation Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 51 reveals that the value of R^2 is .038 meaning

that the Future Orientation Component and GPA share 3.8 % of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Future Orientation

		Grade Point Average	Future Orientation
Grade Point Average	Pearson Correlation	1.000	.196[*]
	Sig. (2-tailed)		.023
	N	135.000	135
Future Orientation	Pearson Correlation	.196[*]	1.000
	Sig. (2-tailed)	.023	
	N	135	135.000

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

Table 50 – GPA and Future Orientation Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.196[a]	.038	.031	.36885

a. Predictors: (Constant), Future Orientation

Table 51 – GPA and Future Orientation Component (R^2)

Planning

Table 52 reveals that there is a positive, significant correlation between the Planning Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 53 reveals that the value of R^2 is .076 meaning that the

Planning Component and GPA share 7.6% of the variance between themselves.
According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate
technique to measure the relationship between variables and assess their
significance.

Planning

		Grade Point Average	Planning
Grade Point Average	Pearson Correlation	1.000	.275[**]
	Sig. (2-tailed)		.001
	N	135.000	135
Planning	Pearson Correlation	.275[**]	1.000
	Sig. (2-tailed)	.001	
	N	135	135.000

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

Table 52 – GPA and Planning Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.275[a]	.076	.069	.36164

a. Predictors: (Constant), Planning

Table 53 – GPA and Planning Component (R^2)

Evaluating Alternatives

Table 54 reveals that there is a positive, but not significant correlation between the Evaluating Alternatives Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 55 reveals that the value of R^2 is .012 meaning that the Evaluating Alternatives Component and GPA share 1.2% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Evaluating Alternatives

		Grade Point Average	Evaluating Alternatives
Grade Point Average	Pearson Correlation	1.000	.109
	Sig. (2-tailed)		.207
	N	135.000	135
Evaluating Alternatives	Pearson Correlation	.109	1.000
	Sig. (2-tailed)	.207	
	N	135	135.000

Table 54 – GPA and Evaluating Alternatives Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.109[a]	.012	.005	.37388

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.109[a]	.012	.005	.37388

a. Predictors: (Constant), Evaluating Alternatives

Table 55 – GPA and Evaluating Alternatives Component (R^2)

Anticipating Consequences

Table 56 reveals that there is a positive, but not significant correlation between the Anticipating Consequences Component of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 57 reveals that the value of R^2 is .016 meaning that the Anticipating Consequences Component and GPA share 1.6% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Anticipating Consequences

		Grade Point Average	Anticipating Consequences
Grade Point Average	Pearson Correlation	1.000	.125
	Sig. (2-tailed)		.150
	N	135.000	135
Anticipating Consequences	Pearson Correlation	.125	1.000
	Sig. (2-tailed)	.150	
	N	135	135.000

Table 56 – GPA and Anticipating Consequences Component (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.125[a]	.016	.008	.37320

a. Predictors: (Constant), Anticipating Consequences

Table 57 – GPA and Anticipating Consequences Component (R^2)

Short Form Total Score

Table 58 reveals that there is a positive, significant correlation between the Total Score of the Learner Autonomy Profile-Short Form and Grade Point Average while Table 59 reveals that the value of R^2 is .057 meaning that the Total Score and GPA share 5.7% of the variance between themselves. According to Alreck & Settle (1994, p. 319) regression analysis is the appropriate technique to measure the relationship between variables and assess their significance.

Short Form Total

		Grade Point Average	Short Form Total Score
Grade Point Average	Pearson Correlation	1.000	.238[**]
	Sig. (2-tailed)		.005
	N	135.000	135
Short Form Total Score	Pearson Correlation	.238[**]	1.000
	Sig. (2-tailed)	.005	
	N	135	135.000

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

Table 58 – GPA and Short Form Total Score (Correlation)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.238[a]	.057	.050	.36533

a. Predictors: (Constant), Short Form Total Score

Table 59 – GPA and Short Form Total Score (R^2)

Summary of Results

Table 60 (next page) reveals that the Total Score and all four Constructs of the Learner Autonomy Profile-Short Form have a positive, significant correlation with Grade Point Average. However, only the Total Score and Learner Resourcefulness Construct have a significant correlation at the .01 level; Learner Desire, Learner Initiative, and Learner Persistence have significant correlations with Grade Point Average at the .05 level. Results that were significant at the .01 level indicate a 99% chance that the results are correct while those that were significant at the .05 level have a 95% chance of being correct.

In addition, there are nine components that have a positive, significant correlation with Grade Point Average. Of these the Action Orientation, Self-Regulation, Deferring Gratification, Resolving Conflict and Planning Components are significant at the .01 level while the Group Identity, Growth and

Balance, Communication Skills and Future Orientation Components are significant at the .05 level.

A total of 13 Components have a positive, but not significant correlation with Grade Point Average: Circumstance, Expression, Love Issues, Change Skills, Goal-Directedness, Overcoming Obstacles, Active Approach, Self-Starting, Volition, Goal Maintenance, Learning Priority, Evaluating Alternatives and Anticipating Consequences.

Table 60 – Summary of Results

Hypothesis	Description	Result
H_1	There is a significant correlation between the *Learner Desire* construct of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	**Positive, Significant***
H_{1a}	There is a significant correlation between the *Circumstances component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	Positive, Not Significant
H_{1b}	There is a significant correlation between the *Expression component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	Positive, Not Significant
H_{1c}	There is a significant correlation between the *Group Identity component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	**Positive, Significant***

H_{1d}	There is a significant correlation between the *Growth and Balance component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	**Positive, Significant***
H_{1e}	There is a significant correlation between the *Love Issues component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	Positive, Not Significant
H_{1f}	There is a significant correlation between the *Communication Skills component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	**Positive, Significant***
H_{1g}	There is a significant correlation between the *Change Skills component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	Positive, Not Significant
H_2	There is a significant correlation between the *Learner Initiative* construct of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	**Positive, Significant***
H_{2a}	There is a significant correlation between the *Goal-Directedness component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	Positive, Not Significant
H_{2b}	There is a significant correlation between the *Action-Orientation component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	**Positive, Significant****

H_{2c}	There is a significant correlation between the *Overcoming Obstacles component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	Positive, Not Significant
H_{2d}	There is a significant correlation between the *Active-Approach component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	Positive, Not Significant
H_{2e}	There is a significant correlation between the *Self-Starting component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	Positive, Not Significant
H_3	There is a significant correlation between the *Learner Persistence* construct of the Learner Autonomy Profile-Short Form and academic performance as measure by college GPA.	**Positive, Significant***
H_{3a}	There is a significant correlation between the *Volition component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	Positive, Not Significant
H_{3b}	There is a significant correlation between the *Self-Regulation component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	**Positive, Significant****
H_{3c}	There is a significant correlation between the *Goal-Maintenance component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	Positive, Not Significant

H_4	There is a significant correlation between the *Learner Resourcefulness* construct of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	**Positive, Significant****
H_{4a}	There is a significant correlation between the *Learning Priority component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	Positive, Not Significant
H_{4b}	There is a significant correlation between the *Deferring Gratification component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	**Positive, Significant****
H_{4c}	There is a significant correlation between the *Resolving Conflict component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	**Positive, Significant****
H_{4d}	There is a significant correlation between the *Future Orientation component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	**Positive, Significant***
H_{4e}	There is a significant correlation between the *Planning component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	**Positive, Significant****
H_{4f}	There is a significant correlation between the *Evaluating Alternatives component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	Positive, Not Significant

H$_{4g}$	There is a significant correlation between the *Anticipating Consequences component* of the Learner Autonomy Profile-Short Form and academic performance as measured by college GPA.	Positive, Not Significant
H$_5$	There is a significant correlation between the *Total Score* of the Learner Autonomy Profile – Short Form and academic performance as measured by college GPA.	**Positive, Significant****

* Correlation is Significant at the 0.05 Level (2-tailed)
** Correlation is Significant at the 0.01 Level (2-tailed)

Chapter Summary

This chapter presented the results of the study and described the techniques used to analyze the data and answer the research question. The central question of this study was: What is the correlation between Learner Autonomy and academic performance in adult learners, as measured by the constructs and components of the Learner Autonomy Profile-Short Form (LAP-SF)?

This chapter has shown that for the total score, each of the constructs and some of the components there is a positive, significant correlation with GPA. The following chapter will present conclusions and recommendations for future research in this area.

CHAPTER FIVE: SUMMARY AND CONCLUSION

Overview of the Study

This chapter summarizes the study and discusses the findings in light of the research question, constructs and components. It is divided into five sections: Overview, Discussion of Findings, Limitations of the Study, Implications for Theory and Practice and a Conclusion.

The central question of this study was: What is the correlation between Learner Autonomy and academic performance in adult learners, as measured by the constructs and components of the Learner Autonomy Profile-Short Form-Short Form (LAP-SF-SF)?

Research on Learner Autonomy has been largely confined to validation of the construct, description of groups, or investigation of Asian student cohorts (Carr, 1999; Ponton, 1999; and Derrick, 2001). A clear link between LA and academic performance has not yet been explored which leaves a gap in the literature of both LA and academic performance.

This study sought to fill this gap by exploring the relationship between the LAP-SF and academic success as measured by college GPA. In the following section, the various findings from the study are described and potential reasons are suggested for them along with a short discussion of the potential importance of the finding

Discussion of Findings

The research study resulted in six major findings. These included overall correlation, construct correlation, component correlation, strongest correlation, general strength of correlation and the positive nature of the correlations.

Overall Correlation

The first major finding of the study was that a positive, significant correlation was found between the Total Score on the LAP-SF and GPA. This may be due to the fact that many of the components in the LAP-SF are seen as contributors to academic success. This is important because it points to the possibility that the LAP-SF may be seen as a diagnostic tool for helping to identify areas for improvement that can positively impact GPA – and thus academic success.

Indeed, while GPA is one of the most popular proxies for academic ability (Grove, Wasserman and Grodner, 2006), it – like most proxies – still only accounts for a small fraction of the variability in academic performance (Tross et al., 2000). Part of this may lie in the fact that GPA is a single measure that cannot be parsed to investigate further. Conversely, the LAP-SF, which correlates significantly with GPA, can be parsed into four major constructs and 22 components, thus allowing for meaningful questions about the elements that impact an individual's academic success.

Construct Correlation

The second major finding has to do with the relationship between the four constructs and GPA. In the study it was determined that all four of the constructs had a significant correlation with GPA. However, three of the four constructs had a significant relationship with GPA at the .05 level while one had a significant relationship at the .01 level.

This may be due to the specific components that make up each of the constructs and that make them each unique. Combined they make a significant predictor of GPA, but separately they do not always do so by the same amount. This is important because if the LAP-SF is to be used as a diagnostic tool, it is important to determine which parts are most helpful in fulfilling this requirement.

That the four constructs differ in correlation is not surprising given that prediction of academic performance – especially traditional measures) is inherently difficult (Mouw & Khanna, 1993). This has been found to be true for intellectual predictors (Gustafson, 1999) and personality predictors (Tross et al., 2000). It seems that throughout the literature, even the best predictors don't explain all the variation thus a predictor that correlates significantly with GPA but that also offers many components to it would seem to be advantageous for future research.

Component Correlation

Another important finding dealt with the individual components that make up the LAP-SF. It was found that only nine individual components have a significant relationship with GPA while 13 did not. This may be true because of the varying degrees by which they support specific ends like higher grades. This is important because effort to improve specific components may have varying degrees of impact on academic success as measured by GPA. Knowing which areas to concentrate on can lead to better results and more focused efforts for students and educators.

It is interesting to speculate whether the same breakout of components would occur in a sample of self-directed learners. As Speark and Mocker (1981) pointed out, in formal learning the student controls neither the subject matter nor the process while in self-directed learning the student controls both. It is possible that some components favor one situation over the other so this is an area that might be fruitful for further research.

Strongest Correlation

The next major finding is that a few components were much stronger than the rest in terms of correlation coefficient. The strongest correlation was between the Planning Component and GPA with a coefficient of .275. This was closely followed by the Self-Regulation Component at .270. Planning would not seem to be a surprise as a strong predictor of GPA in that so much of study is tied to

planning and overall preparation. (See Tross, 2000, discussion on the importance of conscientiousness in academic success).

The importance of this finding is that it demonstrates the most important areas for focus in development in order to diagnose and perhaps improve GPA. It is important to consider that while some components are more significantly correlated with GPA than others, that since the Total LAP-SF score is significantly correlated with GPA, these "non-significant" measures still may have value in helping to diagnose a gap between academic potential and performance.

Strength of Correlation

The penultimate major finding was that the overall strength of correlations was fairly weak. Though many of the constructs and components – and the total LAP-SF score – had significant correlations with GPA, none had a correlation coefficient greater than .275. This indicates that a relationship does exist but it is not definitive.

This may be due to the limited number of participants and suggests a need for further research. This is important because if the LAP-SF is to become a tool for diagnosis and improvement in academic performance, the strength of its predictive power must be better understood. Though the correlation is fairly weak, it is important to note that many other predictors of academic success have

correlations with an r-squared of less than .25 – leaving a great deal of unexplained variance (Mouw & Khanna, 1993).

Positive Nature of Correlations

The final major finding of the study was the positive nature of the correlations. All four constructs, each of the 22 components and the total LAP-SF score correlated with GPA positively. This indicates that changes in the LAP-SF elements track consistently with GPA and may be due to the fact that LAP-SF elements in general are good predictors of success at any endeavor – it also points to an interesting topic for further research.

The positive nature of the correlation is important because it points toward a better understanding of the reasons why the relationship exists. Finding proxies like this for GPA can only strengthen the canon of adult learning and academic success literature.

Though foundational figures like Houle (1961), Knowles (1968, 1980) and Bandura (1977) still have important things to say about how we learn and how that learning is measured, we still have a great deal of questions about measurement of academic success (Mouw & Khanna, 1993) and the LAP-SF may be an important tool for helping to answer them. See Table 61, below, for a summary of the major findings discussed in this section.

Table 61 – Summary of Findings

Finding	Importance	References
Overall Correlation. There was a positive, significant relationship found between the LAP-SF and GPA.	The LAP-SF may potentially be used as a diagnostic tool for helping students to improve grades.	Grove, Wasserman and Grodner, 2006; Tross et al., 2000
Construct Correlation. Three constructs had a significant correlation at the .05 level while one was correlated at the .01 level.	If the LAP-SF is to be used as a diagnostic tool for improving academic success it is important to know which parts are most helpful in doing so.	Mouw & Khanna, 1993; Gustafson, 1999
Component Correlation. Nine of the components had significant correlations while 13 did not.	Different components may have varying degrees of impact on a student's academic performance. Knowing which components impact a student most may help them to focus their efforts on improvement.	Spear & Mocker, 1981

Strongest Correlation. The strongest correlation found was for the Planning component which had a coefficient of .275.	Planning, closely followed by Self-Regulation, appeared to be the most closely correlated with GPA. Knowing this may help to inform further study into the usefulness of the LAP-SF as a diagnostic tool for improving academic success for students.	Tross, 2000
Strength of Correlations. The correlations between the Total LAP-SF, constructs and components included many that were significant, however, the overall strength of correlations was fairly weak.	The relative weakness of the correlations may point toward the need for a larger sample of students or to the inherent difficulties of survey research; it is important to note that most proxies for academic success (including GPA) have an R-Squared of less than .25.	Mouw & Khanna, 1993
Positive Nature of Correlations. The Total LAP-SF, all four constructs	That all the elements of the LAP-SF had a positive correlation with GPA points to	Houle, 1961; Knowles, 1968, 1980; Bandura,

and each of the 22 components had a positive relationship with GPA.	the stability of the instrument for predicting academic success and to the need for further research to investigate this relationship.	1977; Mouw & Khanna, 1993

Limitations of the Study

While this study has important implications for adult learning, academic performance and learner autonomy, it is important to recognize the limitations related to the effort. This study is limited by a number of constraints including the following:

1) The sample consisted of students enrolled at a single university in the Mid-Atlantic region of the United States. Therefore, the results may not be generalizable to all college students throughout the country.

2) The university used for this study was a private institution so the findings may not be the same as those that would be found at a public or state university.

3) Though the instrument seeks to minimize it, it is possible that the nature of a survey-based study may introduce issues such as question ambiguity, personal bias and lack of knowledge by the respondent.

4) Because this is not a longitudinal study, the overall stability of the study may be subject to question.

<div align="center">Implications for Theory and Practice</div>

The results of the study suggested a number of implications. These can be divided into either theoretical or practical impacts. This section describes those implications first for theory, then for practice.

For Theory

The first implication has to do with the literature on Learner Autonomy, where a relationship between LA and academic performance as measured by GPA has not been fully explored. Previous studies (Carr, 1999; Ponton, 1999; Derrick, 2001; Meyer, 2001) have sought to validate the theory of LAP and to describe different kinds of populations in terms of LAP.

A gap exists in the literature in terms of showing that Learner Autonomy can serve as a diagnostic tool because of its potential relationship with academic success in the form of GPA. Further study in this area is warranted and may lead to a new way of looking at the utility of Learner Autonomy that will benefit student and educator alike such as emergency intervention for at-risk students. One way to do this would be to study the correlation of the LAP-SF and GPA in a much larger group. Similarly, researching this correlation in a longitudinal study may also point to an important link between them.

A second implication for the literature on academic performance, where most of the focus is on the educational needs of children. Here there is a dearth of research on adult learners – particularly in terms of Learner Autonomy. By adding learner autonomy to this canon researchers and educators may find that the LAP (or its constructs or components) can lead them to better answers as to why some students succeed while other do not meet their goals.

A third implication for theory is in the area of adult learning. By tying together Learner Autonomy and Academic Success, a foundation has been laid that should be continued. Though many studies have looked at both ideas, none to date have looked to see how they inter-relate with one another. Questions that remain to be answered include: Can the LAP-SF be used as a diagnostic tool for intervention in cases of underperformance? Should the LAP-SF be used for such purposes? Is the LAP-SF more correlated with GPA as one ages?

A final implication for research would be extend the work of Houle (1961) who had identified different reasons why adult learners choose to participate in a learning experience. It would be interesting to study if there is a relationship between a person's motivation to learn and their scores on the LAP-SF.

For Practice

The first practical implication of the study has to do with the Learner Autonomy Profile (Short Form). As more research is done on the theory of

Learner Autonomy and on the instruments that measure it, a body of knowledge is being built that helps us to understand the place of Learner Autonomy in the canon of adult learning. This study helps to do that by tying Learner Autonomy with an important indicator of academic success. One way to do this might be to use the LAP-SF in an interventional study in which students who's academic success does not meet their potential. The students could take the instrument and, based on their scores, could receive training. A follow up could then assess how (or if) their degree of academic success improved after the intervention.

Next, this study provides a practical benefit in that it will help allow students and schools to capitalize on their investment. By helping to show elements of the LAP-SF that have relationships with academic success in the form of GPA, we add to the understanding of why some students succeed while others do not meet their educational goals.

This is particularly important given the large investment that students make in their education - and that institutions make in their students. For students this means the time and money they spend in attempting to earn a degree. For educators this means the graduation rate which is tied to school ranking and overall prestige.

Another interesting implication for practice might be the usability of the LAP-SF in the non-collegiate learning environment (i.e. corporate training). It seems plausible that a relationship exists between learner autonomy and learning

in any kind of environment, including the workplace, but to date this has not been established conclusively.

A final implication for practice has to do with the nature of counseling. In many educational settings a student who does not feel they are meeting their (or their school's) academic expectations will speak with a mentor, counselor or tutor. The suggestions for improvement typically tend to center on the subject being studied rather than on the individual who is undergoing the study. Using the LAP-SF as a diagnostic tool may help to move the focus from the work to the individual.

Concluding Remarks

This study sought to explore the relationship between learner autonomy and academic success as measured by college GPA. Its findings suggest that there is a positive, significant relationship between the two but that further study is required to best understand how the two relate and to what extent they influence each other.

Doing so will help to improve the literature for adult learning, learner autonomy and academic success – and more importantly may lead to another set of diagnostic tools for helping students and educators to get the most out of their learning investment. In terms of practice, use of the LAP-SF may lead to interventional tools that start with diagnosis of learning needs and result in

improved academic success. Moreover, use of the LAP-SF may change the focus of performance counseling from the subject being taught, to the needs of the individual.

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Appendix A – Cover Letter

May 1, 2006

Dear Student,

Thanks for your interest in a research study that I am conducting that relates to learner autonomy. As you may know, the concept of learner autonomy is important in the field of adult education. With your help I hope to find out some implications that have yet to be studied – and that may help educators to design courses and training that are more effective.

Your participation in this study will be important, but luckily, won't take much of your time. Once you've signed and returned the consent form attached here [IRB form will be attached], I will assign you an ID# and password. These will allow you to access and use an online instrument that assesses learner autonomy. Your responses will be kept in strictest confidence and measures will be in place to protect your identity. When the study is completed, if you request it, a copy of the findings for the study will be forwarded to you. Thanks again for your participation in this important study!

Sincerely,

William C. Lowe

Appendix B – Learner Autonomy Profile Questions[1]

LAP Short Form
66 items, estimated time to complete: 11 minutes

Instructions: Please read each question and mark on the slidebars a score that reflects **how often the item applies to you.** Y score can be any number on the scale from 0 to 10 including decimals (example, 2.75). A score of 0 means you will never per the behavior. A score of 10 means you will always perform the behavior.

1. I will continue to participate in my learning activity even if a family problem interferes with the activity.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
Never   Alwa

2. I will continue to learn because my past learning experiences are valuable to me.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
Never   Alwa

3. When I have difficulty concentrating during a learning activity, I will concentrate harder because I anticipate the future reward.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
Never   Alwa

4. When I am learning something that is not enjoyable, I will think of the eventual reward.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
Never   Alwa

5. When faced with a difficult learning endeavor, I will structure my environment to make learning easier.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
Never   Alwa

6. I see what needs to be done to make my plans work.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
Never   Alwa

7. I will often choose to learn something when I am not involved in a structured learning project such as a class.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
Never   Alwa

8. Even if it interferes with my social life, I will choose to learn something because I enjoy learning.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
Never   Alwa

9. I will be successful in my learning endeavors because I assess my progress.

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
Never   Alwa

10. Before I begin a learning activity, I will try to anticipate problems that might interfere with my learning.

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0	1	2	3	4	5	6	7	8	9

Never   Alwa

11. If a family problem interferes with my learning progress, then I will develop a solution to this problem so that I may contin with my learning.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

12. If I want to learn something, I will plan how to get the required resources.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

13. If I do not think that I have the resources to participate in my desired learning activity, then I will find a way to gather the resources for my learning activity.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

14. I will engage in learning now if I anticipate a future reward from the learning.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

15. I get help from my family when I need it.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

16. If given the choice of learning something or playing, then I will choose to play in spite of the future reward.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

17. I will usually choose other activities over learning.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

18. If I want to learn something, then I will quickly translate this desire into action and not think too much about this desire be I act.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

19. When I have difficulties learning something, I will carefully examine the consequences of my actions.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

20. When I want to learn something, I will think about the possible results of my actions before making decisions.

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

21. If I establish a long range learning goal, then I will also establish intermediate subgoals that, if accomplished, will support ultimate learning goal.

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

22. I ask detailed questions before I begin any kind of task.

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

23. I get along with other people.

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

24. I feel valued.

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

25. If I take a break from participating in a learning activity, then I will motivate myself to resume the activity as soon as possi

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

26. When I am faced with problems while learning something, I will find a solution in a systematic way.

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

27. If I do not feel like learning something new, then I think about the consequences of not learning.

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

28. I will discontinue participating in my learning activity if I think that I do not have the resources to successfully complete the activity.

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

29. When I become frustrated during a learning activity, I will remind myself of the consequences of quitting.

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

30. If I intend to learn something, then I will quickly translate this intention into action.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

31. If there is more to be learned in a longer activity, then I will spend more time because I value learning.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

32. My family encouraged me to find outside interests.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

33. If I intend on learning something, then I will go to or create an environment that supports that learning.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

34. I remain optimistic in the middle of difficult situations.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

35. If I am required to learn something, then I will establish a learning goal to satisfy that requirement.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

36. I can express my emotions to any family member.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

37. I will persist with my primary learning goal although I have additional learning goals to achieve.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

38. I can meet my goals by channeling my emotions.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

39. I was encouraged to defend myself.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

40. I will keep my learning goal my top priority although I have other important things to do.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

41. I am generous.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

42. If I desire to learn something, then I will wait for someone else to help me develop a plan to satisfy this desire before I beg a learning activity.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

43. I am persistent in my efforts to succeed.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

44. I was not criticized for having my own opinion about a family matter.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

45. My family lived by a set of beliefs that made life very pleasant.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

46. If I want to learn something, then I will motivate myself to create my own plan concerning how to satisfy this learning desi

0	1	2	3	4	5	6	7	8	9

Never   Alwa

47. I will apply continued effort towards my learning goal when I know I am responsible for my learning.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

48. I will maintain the effort needed to accomplish additional tasks related to my learning goal.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

49. I will persist in participating in my learning activity even if I do not think that I have the time to participate.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

50. I make choices that allow me to control my life.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

51. I will usually choose other activities over learning if I am not required to learn something.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

52. I will participate in learning difficult things because I believe that learning will improve my ability to learn other difficult thin

0	1	2	3	4	5	6	7	8	9

Never   Alwa

53. I will devise a plan to accomplish my learning goal.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

54. Even if a learning activity is extremely difficult, I will endure because quitting is not an alternative for me.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

55. I am willing to compromise.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

56. I am organized.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

57. If I do not think that my desired learning activity is as important as another non-learning activity, then I will figure out a wa prioritize my learning activity above the other non-learning activity.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

58. I will manage my schedule to achieve my learning goal.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

59. I will spend most of my time doing other things rather than learning.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

60. I will continue to value learning that I do on my own.

0	1	2	3	4	5	6	7	8	9

Never   Alwa

61. I get plenty of what I need and want.

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

62. I will set a very specific learning goal to achieve.

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

63. If I desire to learn something, then I will establish a clear goal that represents specifically what I want to accomplish.

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

64. My family had traditions that we practiced.

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

65. My family gives me security and strength.

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

66. To reach a solution, I can separate my emotions from my problems.

0	1	2	3	4	5	6	7	8	9	

Never   Alwa

Submit Responses   Cancel

Appendix C – IRB Review and Approval

THE GEORGE WASHINGTON UNIVERSITY MEDICAL CENTER
WASHINGTON DC

Date: August 9, 2007

To: Michael Marquardt, Ph.D.

From: Katherine Goodrich, M.D.
              IRB Chair, Committee on Human Research
              Institutional Review Board Panel#3, FWA00005945

Re: Correspondence dated 01/18/2007

Subject: **IRB#010753** -- *A Corelational Study of the Relationship between Learner Autonomy and Academic Achievement*

Risk Level: **Minimal**   **Status**: Active   **Expiration date: 7/31/2008**

This is to certify that the Institutional Review Board has **fully approved** the above referenced protocol via an expedited review process pursuant to Federal regulations 45 CFR 46.110 (1), 46 CFR 8392. The IRB determined that this project qualifies for expedited review under category **# 7**. Pursuant to 45 CFR 46.117 (c), this study qualifies for a waiver of documentation of consent.

The expiration date of this project is **7/31/2008.** HHS regulations at *45* CFR 46.109(e) require that **continuing review** of research be conducted by the IRB at intervals appropriate to the degree of risk and **not less than once per year**. The regulations make **no provision for any grace period extending the conduct of the research beyond the expiration date of IRB approval. When your protocol expires all research activities must stop.** Please mark your calendar now to insure that the IRB receives a renewal request 30 days before the anniversary date of the project, if this study is expected to extend beyond one year.

This protocol has been approved for **a maximum number of 125 subjects** to be enrolled under the auspices of George Washington University. If you wish to increase enrollment beyond this number, you must submit a modification request to the IRB and obtain approval before exceeding this number.

Investigators are reminded that the IRB must be notified if the project is altered in any way (change in location, personnel, number of subjects, age of subjects, or any change in research protocol). If you have any questions, please do not hesitate to contact the Office of Human Research either by email at ohrirb@gwumc.edu or via phone at 202-994-2715.

KG/kec

Page 1 of 1

Figure 4 – IRB Approval

The George Washington University
WASHINGTON DC

Information about the Research Study
A CORELATIONAL STUDY OF THE RELATIONSHIP BETWEEN
LEARNER AUTONOMY AND ACADEMIC ACHIEVEMENT

You are invited to participate in a research study under the direction of Dr. Mike Marquardt of the Graduate School of Education and Human Development (GSEHD), George Washington University (GWU). Taking part in this research is entirely voluntary. Your academic standing will not, in any way, be affected should you choose not to participate or if you decide to withdraw from the study at any time.

The purpose of this study is to investigate the relationship between learner autonomy and academic achievement. The central question of this study is: What is the correlation between Learner Autonomy and academic achievement in adult learners, as measured by the main and subscales of the Learner Autonomy Profile (LAP)?

A total of 125 participants at this institution will be asked to take part in this study. This will be the only location in the study.

If you choose to take part in this study, you will complete an online instrument that measures your capacity for autonomous learning. The total amount of time you will spend in connection with this study is around one hour.

There are no physical risks associated with this study. There is, however, the possible risk of loss of confidentiality. Every effort will be made to keep your information confidential, however, this can not be guaranteed. Some of the questions we will ask you as part of this study may make you feel uncomfortable. You may refuse to answer any of the questions and you may take a break at any time during the study. You may stop your participation in this study at any time.

You will not benefit directly from your participation in the study. The benefit to science and humankind that might result from this study is a better understanding of the relationship between a learner's autonomy and their academic achievement.

You will not be paid for taking part in this study.

The investigator can decide to withdraw you from the study at any time. You could be taken off the study for reasons related solely to you (for example, not following study-related directions from the Investigator) or because the entire study is stopped.

If results of this research study are reported in journals or at scientific meetings, the people who participated in this study will not be named or identified. GW will not release any information about your research involvement without your written permission, unless required by law.

Figure 5 – Study Information Sheet

The Office of Human Research of George Washington University, at telephone number (202) 994-2715, can provide further information about your rights as a research participant. If you think you have been harmed in this study, please report this to the Principal Investigator of this study or call the Office of Human Research immediately.

Further information regarding this study may be obtained by contacting Casey Lowe (Graduate Student), at telephone number (703) 243-0310.

To ensure anonymity, your signature is not required in this document unless you prefer to sign it. Your willingness to participate in this research study is implied if you proceed with completing the survey/interview.

*Please keep a copy of this document in case you want to read it again.

A P P R O V E D
The George Washington University
Institutional Review Board
·FWA00005945·

A CORELATIONAL STUDY OF THE RELATIONSHIP BETWEEN
LEARNER AUTONOMY AND ACADEMIC ACHIEVEMENT

You are invited to participate in an anonymous research study to investigate the relationship between learner autonomy and academic achievement.

The total amount of time you will spend in connection with this study is around one hour. You will not be paid for taking part in this study, but you will help to provide a better understanding of the relationship between a learner's autonomy and their academic achievement.

Contact Casey Lowe (Graduate Student), at
(703) 243-0310 for more information today!

APPROVED
The George Washington University
Institutional Review Board
·FWA00005945·

Figure 6 – Sample Advertisement