# Impact of AOD and Parental Income on the Academic Performance of Students

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*In today's academic landscape, students' academic performance serves as a crucial yardstick for success. This research endeavors to ascertain whether decision-related action orientation (AOD) and parental income can be considered predictors of students' academic performance. The study aims to establish the correlation between Action versus State Orientation, parental income, and students' academic performance. The research utilized a quantitative survey instrument to collect data. The results indicate that AOD significantly affects students' academic performance, whereas parental income does not. The study concludes by underscoring the implications of these results for educators and suggesting potential avenues for future research.*

**Keywords:** Action Orientation, State Orientation, AOD, Parental Income, Academic Performance

## 1. Introduction

The relationship between parents' socioeconomic status and students' academic attainment has been an interesting subject of scholarly discourse over the years. Researchers, educators, and trainers have long been intrigued by the factors that most significantly contribute to the quality of student performance. These factors, both within and outside the classroom, exert influence on students' academic achievements and can be categorized as peer, school, family, and individual factors (Gregg et al. 2019). Family background encompasses various elements such as parents' economic status, family size, structure, educational level, and occupation, among other aspects of family life. One determinant linked to the learning process associated with family background is the income and occupation of parents. The economic status of parents plays a crucial role in helping their children's education. Parents with lower incomes often face the challenge of working longer hours to make ends meet, leaving limited time for involvement in their children's academic activities and engagement in their learning process. Naturally, these attributes can influence the parent-child relationship and the parental desire for their children's success (Sirin 2003). Additional efforts were made to determine the specific reasons that come together to see how students regulate their decisions for better academic performance.

As per action control theory, individuals regulate their actions through either action orientation or state orientation. These orientations are linked to individual differences in regulating emotions, cognition, and behavior for voluntary actions (Kuhl J. 1992). They consist of three main aspects. Failure-related Action Orientation (AOF) represents the inability to regulate negative emotions during arousal and is a response to threatening situations like failure, major life changes, or anxiety. AOF comprises Disengagement and Preoccupation. The second aspect is decision-related action orientation (AOD), with initiative versus hesitation dimensions. It is determined by the tendency to respond to demanding conditions like time pressure, working memory load, or task difficulty. Hesitation denotes the inability to initiate voluntary actions even when there is no rational obstacle. State-oriented individuals struggle to initiate or switch to new assignments, while action-oriented ones easily initiate tasks. The third aspect is action orientation during successful activity performance (Persistency versus Volatility) called performance-related action orientation (AOP). It reflects the extent to which individuals remain focused on tasks. Action-oriented individuals persistently concentrate on their intentions until task completion, while state-oriented individuals are easily distracted, affecting their overall performance (Kuhl J. 1992). Action-oriented individuals tend to be more successful in academic courses (Diefendorff et al. 2000). In AOD, those with action orientation make quicker decisions, and commitment and demonstrate more success in efficiently implementing challenging goals (Beckmann et al. 1984). So how we can measure the academic achievements based on their performance to predict such impacts?

Significant job recruiters evaluating marketing majors consider grade point average (GPA) to be a crucial screening criterion for potential applicants (Barr et.al. 2002). Some organizations go to the extent of automatically excluding candidates who do not meet a minimum GPA requirement, as recruiters believe that GPA serves as an indicator of the applicant's capability, intelligence, and ability to absorb job-related information (Barr et al. 2002). Furthermore, a study conducted for comparative analysis between undergraduate students with high GPAs and those with lower GPAs indicated that upon graduation, individuals with high GPAs encounter lower unemployment rates, are more likely to secure jobs related to their field with substantial career potential and exhibit more than double the likelihood of pursuing further education compared to students with lower GPAs

Given the scarcity of such studies in many regions, this research aims to explore whether parents' income and decision-related action orientation, significantly predict students' academic performance Therefore, it becomes important to understand the impact of parental income and AOD on the academic performance of students

## 2. Literature Review

Many literary works have independently delved into distinct aspects such as action orientation, state orientation, learning efficiency, parental income, and academic performance in the past. However, there is a noticeable shortage of research that comprehensively integrates these domains. A summary of a portion of the existing literature is as follows

**Theory of Action versus State Orientation**

The construct of Action versus State Orientation (ASO) plays a crucial role in the Volitional Action Control Theory (Kuhl J. 1984; 2000). According to this theory, individuals' actions are governed by two distinct regulatory modes under high-demanding conditions: Metastatic (change-promoting) and Catastatic (change-preventing). In the Metastatic mode, individuals effectively utilize their mental capabilities, demonstrating decisiveness and taking deliberate actions, categorizing them as Action Oriented. Conversely, in the Catastatic mode, individuals use their capabilities less effectively, exhibiting indecisiveness and hesitation, and are thus termed state-oriented.

ASO is a three-dimensional construct encompassing hesitation, preoccupation, and volatility, each corresponding to different facets of the goal-striving process. First, Hesitation distinguishes between individuals displaying initiative (action-oriented) and those showing hesitation (state-oriented) when initiating goal-directed activities. Action-oriented individuals promptly embark on tasks, while state-oriented individuals lack the behavioral capacity to take action. For instance, someone high in hesitation might procrastinate in starting an undesirable work task, leading to subsequent challenges due to insufficient time for completion.

Secondly, the dimension of Preoccupation distinguishes individuals displaying disengagement (action-oriented) from those exhibiting preoccupation (state-oriented). Action-oriented individuals can detach themselves from thoughts of alternative goals or past setbacks that might hinder progress on the current task. Conversely, state-oriented individuals tend to extensively ruminate on past setbacks or errors, diverting their attention from present and future demands that could still be managed.

The third dimension is Volatility, which concerns the capacity to remain persistent (action-oriented) or succumb to volatility (state-oriented). Action-oriented individuals effectively sustain focus on an intention until the task is accomplished, while state-oriented individuals are easily distracted and susceptible to being pulled off-task. For example, an individual high in volatility may constantly shift between various partially completed goals instead of selecting a single goal and persisting with focused effort until completion. The theory of action and state orientation elucidates why individuals may, at times, engage in mental activities and behaviors that are disconnected from their current goals

**Academic Performance**

The academic performance of students serves as a crucial gauge for success in higher education, often predicting achievements in subsequent academic and professional endeavors. Various factors, including motivation, study habits, and personality traits, contribute to students' academic success. Among these traits, goal orientation has been identified as a significant factor influencing academic performance. Goal orientation pertains to individuals' approaches to their goals and the strategies they employ to attain them (Dweck & Leggett 1988).

In the literature, two types of goal orientation have been recognized: action orientation and state orientation. Action orientation characterizes individuals who concentrate on the actions required to reach their goals, displaying proactivity, persistence, and a strong work ethic. In contrast, state orientation refers to individuals focused on the outcome of their goals, exhibiting reactivity, a tendency to seek external validation, and a desire for immediate gratification (Elliot & McGregor 2001).

While research indicates a connection between goal orientation and academic performance (Schunk & Pajares 2002), there is limited exploration of the impact of action versus state orientation on students' exam performance. The term "performance" in this context refers to the grade obtained by students in their studies.

**Parental Income**

Much of the research on educational mobility typically assumes that the relationship between parents' economic resources and their children's academic performance remains consistent across low- and high-performing students. Investigating such variations can enhance our understanding of how family background influences children's life opportunities. Variations in students' performance are often tied to their family background, with research typically exploring factors such as parents' ethnic origin, educational achievements, class position, and income. However, the role of parental wealth has received comparatively less attention in existing studies, despite recent evidence suggesting strong associations between both parental wealth and income with students' educational choices and performance (Conley 2001; Cooter et al. 2004)

To comprehensively answer how parental income and wealth matter, it is essential to consider the predominant focus of most studies on average academic performance or cognitive test scores. Such studies typically examine how students' academic performance varies between socio-economic groups, family backgrounds, and gender on average, representing a potential critical shortcoming in the literature. Students' performance in school often varies based on their family background, with research traditionally exploring factors such as parents' ethnic origin, educational achievements, class position, and income. However, less attention has been given to the role of parental wealth in existing studies. Recent evidence suggests a strong correlation between parental income with students' academic performance.

**Interaction between Academic Performance and Parental Income**

The interaction between students' academic performance and parental income is a complex and multifaceted relationship that

has been extensively studied in educational research.

**Access to Educational Resources**
Higher parental income often correlates with increased access to educational resources. This includes high-quality schools, private tutoring, educational materials, and extracurricular activities. Students from families with higher incomes may have access to better-equipped schools with experienced teachers, smaller class sizes, and a variety of educational programs.

**Educational Support and Guidance**
Higher-income parents often have more resources to provide educational support and guidance to their children. This may include assistance with homework, involvement in school activities, and encouragement to pursue academic goals. Parents association has been consistently related to good academic performance.

**Health and Nutrition**
Parental income can influence a family's ability to provide adequate nutrition and healthcare. Good physical health is essential for cognitive development and sustained academic performance. Lower-income families may face challenges related to nutrition and healthcare, potentially impacting a student's ability to concentrate and learn.

**Stress and Economic Strain**
Economic strain in lower-income families may contribute to stress, which can negatively affect students' academic performance. Financial difficulties can lead to distractions, increased responsibilities, and a lack of resources for educational enrichment.

**Educational Aspirations and Expectations:** Parental income can shape the educational aspirations and expectations parents have for their children. Higher-income families may prioritize and encourage higher education, influencing a student's motivation and commitment to academic success.

**Peer Influence and Social Capital**
Higher-income families may provide students with social capital, including connections and networks that can positively impact educational opportunities. Peer influence can also play a role, as students from higher-income families may be surrounded by peers with similar academic aspirations and attitudes.

**Interaction between AOD and Academic Performance**
**Goal Setting and Academic Achievement**
Decision-related action orientation involves the ability to set and pursue goals. Students with a proactive orientation are more likely to set academic goals, which can positively impact their performance.
Setting realistic and challenging academic goals can motivate students to engage actively in their studies, leading to improved academic outcomes.

**Planning and Time Management**
Decision-related action orientation often includes effective planning and time management skills. Students who can plan their study schedules, prioritize tasks, and manage their time efficiently are more likely to excel academically.
The ability to allocate time for studying, assignments, and exam preparation contributes to consistent academic performance.

**Initiative and Proactivity**:
Students with a proactive orientation are more likely to take initiative in their learning. They actively seek out additional resources, participate in class discussions, and engage with the material beyond the minimum requirements. Proactive students may be more inclined to ask questions, seek clarification, and take responsibility for their learning, all of which can positively impact academic performance.

**Adaptability and Resilience**:
Decision-related action orientation involves adaptability and resilience in the face of challenges. Students who can navigate setbacks, learn from failures, and adapt their strategies are better equipped to handle academic demands. Resilient students are more likely to bounce back from academic challenges and maintain consistent performance over time.

**Self-Discipline and Study Habits**
Decision-related action orientation is associated with self-discipline, a crucial trait for academic success. Students who can maintain focus, resist distractions, and adhere to study habits are likely to perform well in their academics. Developing effective study habits, such as regular study sessions, note-taking, and active learning, contributes to a positive academic outcome.

**Decision-Making in Academic Pathways**
Decision-related action orientation extends to decisions about academic pathways and career goals. Students who actively plan their educational journey, make informed decisions about courses and majors, and align their studies with their interests are

more likely to succeed academically.

**Peer and Social Influence**

Decision-related action orientation can be influenced by peers and the social environment. Students who surround themselves with academically motivated peers may be more likely to adopt proactive orientations and experience positive academic outcomes.

In conclusion, the interaction between AOD and Parental Income has significant implications for students' academic achievements. This is an important oversight because we know very little about how to broaden our understanding of AOD and parental income and their impact on individuals' academic performance. So, the purpose of this study is to examine the impact and relationship between decision-related action orientation (AOD) and parental income on the academic performance of students.

## 3. Research Objective and Design

**Research Objectives**

- To study the impact of AOD on students' academic performance
- To study the impact of Parental Income on students' academic performance

**Research Design, Sample, and Data**

The present study adopts a descriptive research design, specifically employing survey research methodology, to investigate the influence of AOD and parental income on the academic performance of undergraduate students. The study involves a sample of fifty-nine college-going students from institutions of higher education.

To assess the AOD and Parental income parameters of the respondents, a survey questionnaire was administered. This questionnaire measures decisions related to action orientation (AOD) and parental income and evaluates both against students' academic performance (Grade) and AOD as well as between Parental income and academic performance (Grade). This analysis aims to determine if there is a statistically significant correlation between AOD and academic performance as well as academic performance and Parental income.

The statistical technique employed for this analysis was the Cronbach reliability test, Shapiro-Wilk normality test, linear regression analysis, and ANOVA (Analysis of Variance). The study's findings are summarized and presented under various headings, outlining the results and implications of the research. These findings will shed light on the connection between AOD, Parental income, and Students' Academic performance

**Measures**

Academic performance, as assessed through the Grade Point Average (GPA), served as an indicator of the academic achievements of business students, as supported by previous studies. Participants were requested to provide their GPA and the percentage of marks they had earned in the previous semester. To measure AOD, Kuhl's 36-item scale was employed, with each subscale containing descriptions of specific situations. To assess their Parental income, it was taken from the demographic variable asked in the questionnaire.

Data was collected using a structured questionnaire. The collected data underwent reliability testing and statistical analyses, including linear regression and One-way ANOVA tests, using SYSTAT software to derive the study's findings. In this research, academic performance (*Grade*) was considered the dependent variable, while AOD (*AOD-AVG*) and Parental income (*P-INC*) were treated as independent variables. These variables consisted of individual constructs and were evaluated using a five-point Likert scale.

**Research Hypotheses**

**H1:** There is a significant effect of AOD on the academic performance of students

**H2:** There is a significant effect of parental income on the academic performance of students

## 4. Analysis and Findings

**Reliability Test**

The analysis of the data was carried out using SYSTAT v.9. Reliability test was carried out for AOD (*AOD-AVG)* and Parental Income (*P-INC)*. The result of the Cronbach alpha reliability test for *AOD-AVG* was 0.690 and *P-INC* was 0.450. Thus, it can be said that the data set reliability is good.

**Cronbach Reliability Test Values:** Between *Grade* and *AOD-AVG*: $\alpha = 0.690$

Between *Grade* and *P-INC*: $\alpha = 0.450$

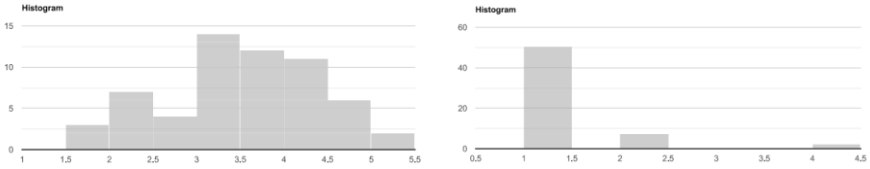
**Normality Test**

Shapiro-Wilk normality test was performed between *AOD-AVG* and *P-INC* versus *Grade* and found that *AOD-AVG* is normally distributed, while *P-INC* is not normally distributed.

**Table 1** *Shapiro-Wilk Normality Test*

| Description | *AOD-AVG* | *P-INC* |
|---|---|---|
| N of Cases | 59 | 59 |
| Arithmetic Mean | 3.407 | 1.220 |
| Standard Deviation | 0.857 | 0.618 |
| Shapiro-Wilk Statistic | 0.968 | 0.402 |
| Shapiro-Wilk p-Value | 0.130 | 0.000003 |

**$H_o$:** The variable is normally distributed
**$H_1$:** The variable is not normally distributed




*AOD-AVG* *P-INC*

**Diagram 1** *Shapiro-Wilk Normality Test*

We find that for *AOD-AVG* The *p*-value of the Shapiro Wilks test is more than 0.05 and this implies that we cannot reject Ho i.e. Accept $H_o$ so *AOD-AVG* data is normally distributed.

While the *p*-value of Shapiro Wilks test for *P-INC* is less than 0.05 this implies that we cannot reject H1 i.e. Accept H1 so *P-INC* data is not normally distributed

**Correlation Test**

Third Pearson correlation tests were conducted to see the correlations between *AOD-AVG* vs *Grade* and *P-INC* vs *Grade* and found that *AOD-AVG* is negatively correlated with *Grade* while *P-INC* is positively correlated with *Grade*.

**Table 2** *Pearson Correlation Test*

| Pearson Correlation Matrix | |
|---|---|
| | *Grade* |
| AOD-AVG | -0.306 |
| P-INC | 0.303 |

**Hypothesis Testing**

**Linear Regression Analysis and ANOVA**

In addition, linear regression was conducted for hypothesis testing using *Grade* as the dependent variable and *AOD-AVG* and *P-INC* as independent variables. One-way ANOVA was performed to find the statistical difference between *P-INC* and *Grade* as well *as AOD-AVG* and *Grade*. Hypothesis testing was conducted based on linear regression analysis and ANOVA test

**First One (H1): Students' Performance** (*Grade*) **vs AOD** (*AOD-AVG*)

**$H_o$:** There is no impact of AOD on the academic performance of students
**$H_1$:** There is a significant impact of AOD on the academic performance of students

**Table 3** *Linear Regression Analysis (Grade vs AOD-AVG)*

| Dependent Variable | *Grade* | | | | | |
|---|---|---|---|---|---|---|
| N | 59 | | | | | |
| Multiple R | 0.306 | | | | | |
| Squared Multiple R | 0.094 | | | | | |
| Adjusted Squared Multiple R | 0.078 | | | | | |
| Standard Error of Estimate | 0.446 | | | | | |
| Regression Coefficients B = $(X'X)^{-1}X'Y$ | | | | | | |
| Effect | Coefficient | Standard Error | Std. Coefficient | Tolerance | *t* | *p*-Value |
| Constant | 1.870 | 0.240 | 0 | . | 7.798 | 0 |
| *AOD-AVG* | -0.166 | 0.068 | -0.306 | 1 | -2.429 | 0.018 |

**Table 4** *ANOVA (Grade vs AOD-AVG)*

| Analysis of Variance | | | | | |
|---|---|---|---|---|---|
| Source | SS | df | Mean Squares | *F*-Ratio | *p*-Value |
| Regression | 1.174 | 1 | 1.174 | 5.901 | 0.018 |
| Residual | 11.335 | 57 | 0.199 | | |

The value of *r* square is 0.078 from linear regression analysis and the *p*-value was .018 (<.05, Table-3), as we find the *p*-value is 0.018, we can accept H1 and can conclude that AOD is having a significant impact on the academic performance of students. Similarly, the one-way ANOVA result exhibited a *p*-value of .018 (<.05, Table-4) so it again showed that students' academic performance is significantly impacted by AOD, so both linear regression analysis and ANOVA test, exhibited that there was a significant impact of AOD on students' academic performance

**Second One (H2): Students' Performance** (*Grade*) **vs Parental Income (***P-INC*)
**$H_0$:** There is no impact of Parental Income on the Academic Performance of Students
**$H_1$:** There is a significant impact of Parental Income on the Academic Performance of Students

**Table 5** *Linear Regression Analysis (Grade vs P-INC)*

| **Dependent Variable** | ***Grade*** | | | | |
|---|---|---|---|---|---|
| N | 59 | | | | |
| Multiple R | 0.303 | | | | |
| Squared Multiple R | 0.092 | | | | |
| Adjusted Squared Multiple R | 0.076 | | | | |
| Standard Error of Estimate | 0.447 | | | | |
| Regression Coefficients B = $(X'X)^{-1}X'Y$ | | | | | |
| Effect | Coefficient | Standard Error | Std. Coefficient | Tolerance | *t* | *p*-Value |
| Constant | 1.028 | 0.130 | 0 | 0 | 7.930 | 0 |
| *P-INC* | 0.227 | 0.095 | 0.303 | 1 | 2.396 | 0.020 |

**Table 6** *ANOVA (Grade vs P-INC)*

| **Analysis of Variance** | | | | | |
|---|---|---|---|---|---|
| Source | SS | df | Mean Squares | *F*-Ratio | *p*-Value |
| Regression | 1.145 | 1 | 1.145 | 5.742 | 0.020 |
| Residual | 11.364 | 57 | 0.199 | | |

The value of *r* square is 0.076 from linear regression analysis and the *p*-value was .020 (<.05, Table-5), as we find the *p*-value is 0.020, we can accept H1 and can conclude that parental income has a significant impact on the academic performance of students. Similarly, the one-way ANOVA results exhibited *a p*-value of .020 (<.05, Table-6) so it again exhibited that students' academic performance was significantly impacted by parental income, so both linear regression analysis and ANOVA test, exhibited that there was a significant impact of parental income on academic performance of students.

## 5. Conclusion

The current research proposed that individuals with higher levels of decision-related action orientation (AOD) and higher parental income would show improved academic performance throughout a semester. The study's findings indicate that both AOD and parental income are predictive factors for students' academic achievements. Those who excel in their exams are likely to receive future rewards and enhance their learning efficiency and productivity in subsequent assignments. Additionally, a statistical correlation was observed between students' academic performance and parental income. Parental support and involvement play a crucial role in motivating children academically, with the socioeconomic status of parents—including earnings, occupations, backgrounds, education levels, and religion—having a significant impact on their children's academic success

**Limitations and Future Scope of Study**

Our research findings highlight the pressing need for more in-depth investigation into AOD and parental income using longitudinal studies. Methodological approaches like Experience Sampling Method (ESM) etc. AOD impact is likely to be particularly pronounced in work environments where decision-making involves high stakes, potentially leading to extensive hesitation and preoccupation with choices. Additionally, workplaces often involve multiple concurrent goals, which can be distracting for individuals with volatile personalities. Future research could also explore how ASO can be integrated with other well-established self-regulation theories.

Therefore, future research on ASO and parental income should consider the degree to which the goals being regulated have been internalized and whether they are self-determined or externally imposed. Our findings also raise questions about whether other dimensions of ASO like AOT and AOF should be the focus of future investigations into students' academic performance, and to help students to use self-regulation processes in their learning, educators need to create opportunities for students to practice them

The findings from this study encourage future research to reassess strategies aimed at establishing more effective support systems and structures. These efforts should facilitate collaboration among families, principals, teachers, students, and the entire school community to inspire and motivate learners toward achieving outstanding academic results. To enhance support and resource accessibility for academic performance, schools should also offer informative literature. This literature can serve to

bridge the gap, particularly for individuals coming from diverse socioeconomic backgrounds, ensuring equitable support and assistance for all learners

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