



Introducing Effort Atrophy Theory through a Comparative Study of Iranian and Iraqi EFL High School Students

Zahraa Mohammed Hussein

Article Info

Article History

Received:

1 March 2026

Revised

1 May 2026

Accepted:

1 July 2026

Published

26 July 2026

Keywords

Effort Atrophy Theory (EAT), unearned success, grade inflation, EFL demotivation, comparative study

Abstract

This research presents Effort Atrophy Theory (EAT), which proposes that repeated exposure to unearned academic success, particularly through grade inflation practices, gradually diminishes student effort in English as a Foreign Language (EFL) contexts. Data were collected using a quantitative comparative survey design through the newly developed Unearned Success Impact Inventory (USII) administered to 120 Iranian and 120 Iraqi high school EFL teachers. Findings suggested that Iranian teachers were more likely than their Iraqi counterparts to have been compelled to inflate grades due to institutional competition pressure. Results indicated that Iranian students, as perceived by their teachers, reduced their effort considerably more after repeated unearned success experiences. This effort-reward imbalance was mediated by an attributional shift from internal controllable factors (e.g., effort) to external uncontrollable factors (teacher leniency). EAT is proposed and represented through four propositions: (1) Effort-Reward Disconnection Principle, (2) Unearned Success Saturation Effect, (3) Attributional Corrosion Mechanism, and (4) Effort-Reward Imbalance Amplifier. These findings have important implications for teacher professional development, institutional accountability, and curriculum design in high-stakes, competition-driven educational institutions. However, conclusions should be interpreted cautiously given the study's reliance on teacher perceptions and cross-sectional design.

1. Introduction

Effort and academic success have long been linked and considered fundamental to educational motivation (Pekrun, 2006). Learner intrinsic and extrinsic motivation persist over time, in line with Deci and Ryan (1985; Ryan & Deci, 2017), because learners perceive a direct contingent connection between what they exert over time and what they achieve (e.g., grade recognition). However, when this contingency is consistently disrupted, for instance, when success is achieved independently of effort, the motivation structure may be undermined, resulting in a phenomenon known as effort atrophy (Sakai & Kikuchi, 2009; Dörnyei, 2001).

A common but under-theorized violation of the effort-outcome contingency occurs through unearned success, which in this case takes the form of grade inflation, giving students higher grades than they actually deserve (Grade Inflation, n.d.; Kohn, 2002). Although grade inflation has been investigated in Western contexts (Bowden, Rodriguez, & Weingarten, 2025; Fordham Institute, 2024), it also affects non-Western, high power-distance education systems such as those in Iran and Iraq, yet remains sorely understudied in these settings.

In these contexts, institutional competition for status often forces administrators to pressure teachers to inflate grades, creating a cycle of unearned success that systematically undermines student effort. Student-reported study engagement, persistence, homework completion, and internal/controllable versus external/uncontrollable attributions are predominant variables in this study. Institutional pressure is investigated as a contextual moderator.

The overall goal of this research is to present and empirically establish Effort Atrophy Theory (EAT), which argues that repeated experiences of undeserved success may produce long-term, potentially irreversible decreases in learner effort through specific psychological and behavioral mechanisms. Toward that end, we conducted a quantitative comparative study of 120 Iranian and 120 Iraqi high school EFL teachers, examining the prevalence and effects of grade inflation practices on student effort.

The significance of this study is threefold. Theoretically, it presents and operationalizes EAT as a fresh framework for understanding how unearned success deters learner motivation. Practically, the findings are actionable for teacher professional development, institutional policy reform, and curricular design in Iran, Iraq, and similar high power-distance, competitive educational systems. By comparing two neighboring countries sharing cultural origins and recent educational backgrounds, the study also identifies context-specific variations in policy-related practices. Finally, the study illuminates how

unearned success is not merely an administrative convenience but a potentially destructive dimension that undermines the effort that educational systems purport to nurture.

2. Literature Review

2.1 Theoretical Background

2.1.1 Self-Determination Theory (SDT): Quest for Competence

SDT (Deci & Ryan, 1985) identifies three basic psychological needs, autonomy, competence, and relatedness, whose satisfaction is necessary for intrinsic motivation. Competence (Ryan & Deci, 2017), defined as the requirement to feel effective in one's environment, is placed at great risk by unearned success. When students gain high grades without having mastered the material, the cycle that facilitates competence development is broken. According to SDT, motivation that is externally regulated (e.g., by grades) may weaken intrinsic interest when it is perceived as controlling rather than informational (Niemic & Ryan, 2009). Unearned grades are particularly controlling and non-informational, thus eroding the very competence feedback that sustains effort.

2.1.2 Attribution Theory (AT)

Weiner (1985, 1992) introduced AT to explain how people perceive success and failure along three dimensions: locus (internal/external), stability, and controllability. Attributing outcomes to effort, which is internal and controllable, favors persistence following failure (because effort can be improved). Attributing outcomes to ability, internal but stable and uncontrollable, can result in hopelessness. External attributions (e.g., teacher leniency, luck) are uncontrollable and diminish effort, as outcomes are perceived to depend on external factors rather than personal investment. When success is achieved without effort and this pattern is repeated, students systematically transition from internal controllable attributions (effort) to external uncontrollable attributions ("teachers give high grades regardless"), which we predict will diminish future effort (Ahmed et al., 2013; Weiner, 1992).

2.1.3 Expectancy-Value Theory (EVT)

Eccles and Wigfield (2002, 2020) suggest that motivation is a function of (a) expectancy of success and (b) subjective task value. Grade inflation artificially raises expectations to near certainty, massively reducing the perceived "cost" of effort: if success is guaranteed without studying, effort becomes economically irrational. Additionally, unearned success reduces the attainment value of grades (how valuable it is to do well) and can diminish intrinsic interest value, whereby learning becomes separated from meaningful feedback (Wigfield & Eccles, 2000).

2.1.4 Learned Helplessness (LH)

LH theory (Seligman, 1975) describes a state in which recurrent negative events from uncontrollable sources lead to reduced effort to affect outcomes. Classical LH focuses on aversive outcomes. However, we propose a parallel “unearned helplessness” that occurs when positive outcomes (success) become uncontrollable (i.e., can happen regardless of effort). Student disengagement from the learning process can be even more pronounced in such cases (Ferris-Crisafulli, 2022). This is the essence of EAT: unearned success creates a positive-conditioned form of learned helplessness.

2.1.5 Learned Industriousness

According to Eisenberger (1992), the learned industriousness principle holds that effort is rewarded when it is continually reinforced, and its secondary reward characteristics become associated with increased future effort. Unearned success systematically opposes this process: when low effort yields the same high reward, the “effort → reward” link is severed, and learners become “industriously lazy,” learning that minimal effort is sufficient.

2.1.6 Effort-Reward Imbalance (ERI)

The ERI model (Siegrist, 1996), initially proposed for occupational health, asserts that discrepancies between effort and reward cause stress. In education, a different imbalance occurs: low effort coupled with high reward (unearned success). This paradoxical “effort-reward surplus” is not benign; it has been found to predict lower learning engagement and to mediate learned helplessness (Frontiers in Psychology, 2024). We introduce ERI as an important amplifier in EAT.

2.1.7 Social Contagion of Demotivation

Frenzel et al. (2009) found that teacher emotions contagiously affect students (and vice versa). Classroom practices, particularly grade inflation when institutionalized, create a demotivational climate that spreads through the classroom, normalizing low effort and eroding collective academic engagement. This social contagion mechanism is especially apparent in high power-distance cultures, where teacher authority is rarely questioned and students may perceive inflated grades as normative expectations rather than anomalies.

2.2 Prior Related Work

Numerous studies have shown that grade inflation diminishes student effort and achievement. According to the Fordham Institute (2024), when students receive higher grades without commensurate learning, grades lose meaning and the incentive to earn them disappears. Bowden, Rodriguez, and Weingarten

(2025) found that relaxing high school grading standards mechanically increased GPA but decreased effort and did not improve learning. Similarly, effort-reward imbalance consistently shows a negative relationship with learning engagement, mediated by learned helplessness (Frontiers in Psychology, 2024).

In the Iranian EFL context, studies on demotivation have identified teacher-related determinants such as lack of encouragement and unclear instruction as leading to demotivation (Sakai & Kikuchi, 2009; Gao & Liu, 2022). Iranian EFL students often perceive their success as resulting from external influences like teacher favoritism or luck rather than personal effort (Jahedizadeh et al., 2016).

Comparative studies of formal education in Iran and Iraq (Educational Leadership Research, 2025) have shown differences in educational system structure, curriculum content, and the role of government. However, no comparative study has systematically tested grading practices or the consequences of unearned success between these two countries.

Importantly, a unified theory of effort atrophy resulting from unearned academic success in EFL contexts, particularly in a comparative Iran-Iraq setting, has not been proposed or empirically tested. This gap is significant, as unearned success may be more detrimental to long-term learner motivation than commonly acknowledged, and its mechanisms may be contingent on cultural and institutional factors. Despite decades of attention to motivation, demotivation, and grade inflation, three gaps remain:

1. There is no comprehensive theory explaining how repeated unearned success leads to the steady erosion of student effort. Existing theories (SDT, AT, EVT, LH) explain components, but none integrate them into a holistic model of effort atrophy as a clear motivational process.
2. Comparative research on grade inflation practices and motivation-related effects in non-Western, high power-distance educational contexts is virtually nonexistent. The distinctive dynamics of institutional competition in Iran have produced a unique ecology of unearned success that has not been studied empirically.
3. There is no comprehensive examination of the Iranian versus Iraqi EFL context regarding grade inflation frequency, attributional shifts, and effort reduction.

To address these gaps, this study aims to answer the following research questions:

RQ1: To what extent do Iranian and Iraqi EFL high school teachers report engaging in or being pressured to engage in grade inflation practices?

RQ2: Is there a significant difference in self-reported effort reduction among Iranian and Iraqi EFL students, as perceived by their teachers, after repeated exposure to unearned success?

RQ3: Are attributional patterns (internal-controllable versus external-uncontrollable) related to the relationship between unearned success and student effort reduction?

RQ4: Based on the data, what constitute the core components of EAT?

3. Methodology

3.1 Research Design

This study employed a quantitative comparative survey design. This design was chosen because it allowed for the collection of standardized, comparable data across representative samples from two countries and facilitated statistical comparison of grade inflation practices and their effects. The independent variable was the frequency and intensity of unearned success (operationalized as grade inflation practices), while the dependent variables included student effort reduction, motivational engagement, and attributional patterns. Institutional pressure (administrative control by school administration) was considered a contextual moderator.

The comparative survey design was selected for its ability to efficiently capture data from a large sample across two distinct educational systems, enabling cross-national comparisons while maintaining methodological consistency. However, as a cross-sectional design, it cannot establish causality; therefore, results should be interpreted as associations rather than causal relationships.

3.2 Participants

Participants were 240 high school EFL teachers (120 Iranian, 120 Iraqi), selected through stratified random sampling. Stratification was based on school type (public vs. private) and geographic region (urban vs. rural). Participants were recruited based on the following criteria: (1) having taught for at least 3 years at the high school level, (2) currently teaching EFL, and (3) having knowledge of their school's grading policies. The mean teaching experience was 8.7 years ($SD = 4.2$). Gender distribution was approximately equal (52% female, 48% male). The Iranian sample included four provinces (Tehran, Isfahan, Khorasan Razavi, and Fars); the Iraqi sample included three governorates (Baghdad, Basra, and Erbil). Informed consent was obtained from all participants, and ethical approval was obtained from the researchers' institutions. While stratified random sampling enhances representativeness, the sample may not fully reflect all regions within each country. Additionally, the reliance on teacher volunteers may introduce selection bias.

3.3 Research Instrument

The newly developed Unearned Success Impact Inventory (USII) consists of 32 items across four subscales:

1. Frequency of Grade Inflation (8 items): e.g., “How often are you pressured by school administration to give higher grades than students actually merit?”; “How often do you grade effort rather than actual mastery?”
2. Institutional Pressure Intensity (8 items): e.g., “My school expects teachers to maintain high average grades to attract more students.”
3. Student Effort Reduction (8 items): e.g., “Students in my class show less study effort after receiving unexpectedly high grades.”
4. Attributional Pattern (8 items): e.g., “My students attribute their success to my leniency rather than their own study.”

Responses were rated using a 5-point Likert scale (1 = never/strongly disagree; 5 = always/strongly agree). The USII was prepared in English and subsequently translated into Persian and Arabic through a blind back-translation process. The questionnaire was pilot-tested on 30 teachers (15 per country), yielding Cronbach’s alpha values from 0.84 to 0.92 for the subscales. The USII relies entirely on teacher perceptions of student effort and attributions. While teachers are well-positioned to observe behavioral changes, the lack of direct student data is a significant limitation. Future studies should triangulate teacher reports with student self-reports and behavioral measures.

3.4 Data Collection

Data were collected over three months (September to November 2025). In both countries, local assistant teachers distributed the USII in paper format during monthly meetings. Participation was voluntary and anonymous, with teachers returning completed questionnaires in sealed envelopes. Two reminder visits were conducted at each school to improve response rates. In total, 260 questionnaires were administered, with 240 valid responses returned (92.3% response rate). Data entry was subjected to double-checking for accuracy.

3.5 Data Analysis

Data were analyzed using IBM SPSS v.29. Descriptive statistics and normality tests (Shapiro-Wilk) were conducted, along with reliability analysis (Cronbach’s alpha). For RQ1, independent samples t-

tests were used to compare Iranian and Iraqi teachers on grade inflation frequency and institutional pressure. For RQ2, ANCOVA was conducted to compare student effort reduction between the two groups, with years of teaching experience as a covariate. For RQ3, mediation analysis (PROCESS macro v.4.1) was used to investigate whether attributional patterns mediated the relationship between unearned success and effort reduction. For RQ4, qualitative thematic analysis of open-ended responses (n = 78) was performed to refine EAT propositions. For all inferential tests, the alpha level was set at $p < 0.05$. The qualitative thematic analysis was conducted on open-ended responses provided by teachers at the end of the USII questionnaire. These responses were independently coded by two researchers, with disagreements resolved through consensus. Themes were identified through an iterative process of coding, categorization, and synthesis. This approach was intended to complement quantitative findings and to provide richer contextual insights for theory development. However, the qualitative component is exploratory rather than confirmatory, and the propositions should be viewed as preliminary. Assumptions of normality, homogeneity of variance, and linearity were tested and met for all quantitative analyses. Bootstrapping (5,000 resamples) was used in the mediation analysis to ensure robust confidence intervals.

4. Results

4.1 Preliminary Analysis

The Shapiro-Wilk test indicated that all variables were normally distributed ($p > 0.05$). Cronbach's alpha for the total USII was 0.91 (Iran: 0.89; Iraq: 0.90). No outliers were identified.

Table 1. Descriptive Statistics for Key Variables (N = 240)

Variable	Iran (n=120)	Iraq (n=120)	Total (N=240)
Frequency of Grade Inflation (M, SD)	4.12 (0.67)	3.05 (0.89)	3.58 (0.92)
Institutional Pressure (M, SD)	4.31 (0.59)	2.94 (0.97)	3.62 (1.01)
Student Effort Reduction (M, SD)	3.98 (0.72)	2.87 (0.83)	3.42 (0.98)
External Attribution (M, SD)	3.85 (0.81)	2.74 (0.91)	3.29 (0.99)

Note: Scores range from 1 to 5. Higher scores indicate higher frequency/intensity.

4.2 Results for Research Question 1

To address RQ1, the extent to which Iranian and Iraqi high school EFL teachers reported engaging in or being pressured to engage in grade inflation practices, independent samples t-tests were conducted. Results showed statistically significant differences, with Iranian teachers reporting significantly more frequent grade inflation. These findings are detailed in Table 2.

Table 2. Independent Samples t-Test Results for Grade Inflation Frequency

Group	N	Mean (SD)	t	df	p	Cohen's d	95% CI Mean Difference
Iran	120	4.12 (0.67)	10.72	238	<0.001**	1.39	[0.87, 1.27]
Iraq	120	3.05 (0.89)					

**p < 0.01 (two-tailed). Effect size is large.

Similarly, institutional pressure scores varied substantially between the two groups (Table 3).

Table 3. Independent Samples t-Test Results for Institutional Pressure

Group	N	Mean (SD)	t	df	p	Cohen's d	95% CI Mean Difference
Iran	120	4.31 (0.59)	13.41	238	<0.001**	1.73	[1.17, 1.57]
Iraq	120	2.94 (0.97)					

**p < 0.01 (two-tailed). Effect size is large.

Iranian EFL teachers reported significantly higher rates of mandated grade inflation and stronger perceptions of institutional pressure compared to Iraqi teachers. The large effect sizes ($d > 1.39$) indicate that these differences are practically meaningful. Specifically, 82% of Iranian teachers reported being forced by school administration to inflate grades at least weekly, compared to only 17% of Iraqi teachers. These findings reflect teacher perceptions, which may be subject to social desirability bias, particularly in reporting sensitive practices such as grade inflation. Additionally, cross-national differences in survey response styles (e.g., tendency to use extreme response options) may influence comparisons.

4.3 Results for Research Question 2

To address RQ2, whether there was a significant difference in self-reported effort reduction between Iranian and Iraqi EFL students, as perceived by teachers, ANCOVA was conducted with country as the independent variable, student effort reduction as the dependent variable, and teachers' years of experience as a covariate. The covariate was not significant ($p = 0.31$) and was therefore removed from the final model. Results are shown in Table 4.

Table 4. ANCOVA Summary for Student Effort Reduction by Country

Source	SS	df	MS	F	p	η^2 partial	95% CI
Country	74.89	1	74.89	112.40	<0.001**	0.32	[0.24, 0.40]
Error	158.60	238	0.67				
Total	233.49	239					

**p < 0.01. η^2 partial = 0.32 suggests a sizable effect.

Table 5 presents the estimated marginal means.

Table 5. Estimated Marginal Means for Student Effort Reduction

Country	Mean (SE)	95% Confidence Interval
Iran	3.98 (0.07)	[3.84, 4.12]
Iraq	2.87 (0.08)	[2.71, 3.03]

After controlling for the non-significant effect of teaching experience, Iranian students showed statistically significantly greater effort reduction than Iraqi students, as perceived by their teachers. The large effect size ($\eta^2 = 0.32$) indicates that approximately one-third of the variance in effort reduction is explained by country membership. This finding supports the basic premise of EAT: repeated unearned success begets progressive effort atrophy. These findings are based on teacher perceptions of student effort reduction, not direct measures of student behavior. Teachers may overestimate or underestimate changes in student effort, and their perceptions may be influenced by their own beliefs and expectations. Future research should include student self-reports, behavioral observations, and objective measures of effort (e.g., homework completion rates, time spent studying) to validate these findings.

4.4 Results for Research Question 3

To address RQ3, whether attributional patterns (internal controllable vs. external uncontrollable) mediate the relationship between unearned success and student effort reduction, mediation analysis was conducted using PROCESS Model 4 with 5,000 bootstrap samples. Unearned success (grade inflation frequency) was treated as the independent variable, student effort reduction as the dependent variable, and external attribution as the mediator. Results are summarized in Tables 6 and 7.

Table 6. Impact of Unearned Success on Effort Reduction: Direct and Indirect Effects

Type of Effect	Estimate	SE	95% Bootstrap CI	p	Proportion Mediated
Direct effect (c')	0.31	0.06	[0.19, 0.43]	<0.001**	59%
Indirect effect (a × b)	0.24	0.05	[0.14, 0.34]	<0.001**	41%
Total effect (c)	0.55	0.08	[0.39, 0.71]	<0.001**	100%

$p < 0.01$ (using bias-adjusted bootstrap confidence intervals not including zero).

Table 7. Path Coefficients for Mediation Model

Path	Coefficient	SE	t	p	95% CI
a (UE → EA)	0.62	0.07	8.86	<0.001**	[0.48, 0.76]
b (EA → ER)	0.39	0.06	6.50	<0.001**	[0.27, 0.51]
c' (UE → ER)	0.31	0.06	5.17	<0.001**	[0.19, 0.43]

Note: UE = Unearned Success (frequency of grade inflation); EA = External Attribution; ER = Effort Reduction. All coefficients are unstandardized.

External attribution significantly mediated the association between unearned success and effort reduction. The indirect effect (0.24) was statistically significant, as the bootstrap confidence interval did not include zero. The partial attributional shift from internal controllable (effort) to external uncontrollable (teacher factors) accounted for approximately 41% of the total effect of unearned success on effort reduction. The direct effect remained significant, suggesting partial mediation. The mediation model assumes the correct temporal ordering of variables (unearned success → external attribution → effort reduction), but the cross-sectional design cannot establish causality. Alternative pathways (e.g., effort reduction leading to increased external attribution) cannot be ruled out. Longitudinal research is needed to confirm the causal direction.

4.5 Results for Research Question 4

To address RQ4, identifying the core components of EAT as derived from the data, qualitative thematic analysis of open-ended responses ($n = 78$) was conducted. The analysis was guided by Braun and Clarke's (2006) six-phase framework: familiarization with data, initial coding, theme generation, theme review, theme definition, and write-up. Two independent coders analyzed the responses, with inter-coder reliability of 0.87. The analysis produced four key propositions that, together with the quantitative evidence, constitute EAT.

Proposition 1: Effort-Reward Disconnection Principle

The cognitive link between effort and reward is impaired by repeated instances of success that are not associated with effort. Teachers noted that students “expect high grades at any cost” and feel “they do not need to study anymore.” This disconnection was particularly pronounced in the Iranian sample, where teachers reported that students had come to view high grades as an entitlement rather than an earned outcome. This proposition integrates SDT's competence need frustration (Ryan & Deci, 2017) with EVT's devaluation of effort (Eccles & Wigfield, 2002), suggesting that repeated unearned success disrupts the fundamental contingency between effort and outcome that sustains motivation.

Proposition 2: Dose-Response Effect of Unearned Success Saturation

The effect on effort is dose-dependent: each episode of unearned success incrementally weakens the effort-outcome contingency, with cumulative effects becoming substantial over time. Iranian teachers noted that after the 3rd or 4th unearned high grade, “students no longer even tried.” This suggests a saturation effect, where initial episodes may have minimal impact, but repeated experiences lead to

progressive erosion of effort. This proposition aligns with the learned helplessness framework (Seligman, 1975; Ferris-Crisafulli, 2022), extending it to positive but uncontrollable outcomes. It also resonates with the learned industriousness principle (Eisenberger, 1992), where the reinforcement of effort is systematically undermined.

Proposition 3: Attributional Corrosion Mechanism

Unearned success shifts student attributions from internal controllable factors (effort) to external uncontrollable factors (teacher leniency, luck, ease of grading). This shift occurs through an organic series of steps: initial confusion, gradual acceptance, and eventual expectation. As one Iranian teacher described, “Students ask themselves: ‘Why should I study? The teacher will let me pass anyway.’” This proposition directly draws on Weiner’s (1985, 1992) attribution theory, providing empirical support for the prediction that external, uncontrollable attributions diminish future effort. It also extends the theory by specifying the mechanism through which repeated unearned success leads to attributional change.

Proposition 4: Effort-Reward Imbalance Amplifier

The mismatch between minimal effort and maximal reward creates a motivational “surplus” that paradoxically decreases future effort investment. This imbalance is not benign; it amplifies the other mechanisms, making effort atrophy more likely. Teachers reported that when students perceive that “no effort is needed for good grades,” the reward system loses its incentive value entirely. This proposition integrates the effort-reward imbalance model (Siegrist, 1996; *Frontiers in Psychology*, 2024) and extends it to educational contexts. It suggests that the paradoxical “effort-reward surplus” is a key amplifier of the other EAT mechanisms. The propositions derived from open-ended responses are exploratory and should be viewed as preliminary. The qualitative data provide rich illustrations of the quantitative patterns, but further empirical validation, through longitudinal studies, student data, and experimental designs, is necessary to confirm these propositions. The propositions are presented as a theoretical framework to guide future research, not as established facts.

5. Discussion

5.1 Discussion of Research Question 1

The first research question assessed the extent to which Iranian and Iraqi EFL high school teachers engaged in or were pressured to engage in grade inflation. The findings demonstrated that Iranian EFL teachers reported significantly higher frequency of grade inflation and institutional pressure than Iraqi teachers, with large effect sizes (Cohen’s $d = 1.39$ and 1.73 , respectively).

In SDT (Deci & Ryan, 1985; Ryan & Deci, 2017), competence feedback is considered crucial to the development of intrinsic motivation. When teachers are pressured to boost grades, they provide false competence feedback that violates students' need for honest self-assessment and teachers' own professional ethical duties. In high power-distance societies like Iran, hierarchical pressure from administrators tends to substitute for teacher autonomy, resulting in a systemic demotivational ecology.

According to AT (Weiner, 1985, 1992), learners exposed to such systems quickly learn to conflate success with external factors (teacher decisions) rather than attributing achievement to internal factors. These results are consistent with findings by Bowden, Rodriguez, and Weingarten (2025), who reported that lowering high school grading standards increased GPA but decreased student effort. The Fordham Institute (2024) found similar results: lenient grading hurts student outcomes. Our research extends these findings by identifying sharp cross-national differences between Iran and Iraq and linking these differences to varying levels of institutional competition pressure. The observed differences may also reflect reporting biases. Iranian teachers may be more willing to report grade inflation due to greater awareness of the issue, whereas Iraqi teachers may underreport due to social desirability concerns. Cross-cultural differences in response styles may also contribute to the observed differences.

5.2 Discussion of Research Question 2

The second research question examined whether there was a significant difference in student effort reduction between Iranian and Iraqi EFL students, as perceived by teachers, after repeated exposure to unearned success. The results demonstrated that Iranian students showed significantly greater decreases in effort compared to Iraqi students (large effect size $\eta^2 = 0.32$).

EVT (Eccles & Wigfield, 2002, 2020) suggests a dramatic reduction in the subjective value of effort when success is guaranteed independently of effort. In Iran, where unearned success is widespread, effort becomes economically irrational. This is strengthened by the effort-reward imbalance model (Siegrist, 1996; *Frontiers in Psychology*, 2024), in which the mismatch between minimum effort and maximum reward creates a motivational “surplus” that paradoxically decreases future effort investment, a core effect of EAT.

These findings are consistent with work in the effort-reward imbalance literature demonstrating that low effort combined with high reward is a consistent predictor of poor learning engagement, mediated by learned helplessness (*Frontiers in Psychology*, 2024). It also aligns with the “Dr. Fox” effect (Ware & Williams, 1975), where students exposed to charismatic but content-poor lectures rated them highly but learned little, and this undeserved positive evaluation quieted effort. The measure of student effort

reduction was based on teacher perceptions, not direct student reports. Teachers may have different thresholds for perceiving effort reduction, and their perceptions may be influenced by their own expectations or biases. Additionally, the cross-sectional design means we cannot rule out the possibility that students with lower effort levels are more likely to be in environments with grade inflation, rather than grade inflation causing effort reduction.

5.3 Discussion of Research Question 3

The third research question examined whether attributional patterns (internal controllable vs. external uncontrollable) mediated the association between unearned success and student effort reduction. The results showed that external attribution significantly mediated this association, explaining 41% of the effect.

AT (Weiner, 1985, 1992) provides a direct explanatory mechanism. Repeated unearned success provides evidence that effort is not the origin of success. When students experience undeserved success, they begin to transition from internal controllable attributions (effort) to external uncontrollable attributions (teacher leniency). This shift follows the pattern that attribution theory predicts will reduce future effort, as people are less inclined to invest effort in outcomes they believe they cannot control. This mediation model is consistent with Ahmed et al. (2013), who reported that external attribution of success led to lower subsequent effort. It is also consistent with the extensive literature on learned helplessness (Seligman, 1975; Ferris-Crisafulli, 2022), wherein repeatedly uncontrollable positive events lead to passivity, just as uncontrollable negative events do.

The cross-sectional nature of the data limits causal inference. The temporal ordering assumed in the mediation model (unearned success → external attribution → effort reduction) cannot be confirmed. It is possible that students who are less motivated to begin with are more likely to develop external attributions, which then make them more susceptible to the effects of unearned success. Additionally, other mediators not included in the model (e.g., self-efficacy, goal orientation) may be at play.

5.4 Discussion of Research Question 4

The fourth research question focused on identifying the core components of EAT based on the data. The four data-derived propositions together represent EAT. EAT draws on SDT (competence need frustration), attribution theory (effort → ability/luck shift), EVT (effort devaluation), LH (learned helplessness orientation), LI (extinction of industriousness), and ERI (imbalance amplification).

What makes EAT unique is its specific emphasis on unearned success as the primary cause and effort atrophy as the unique outcome. Although learned helplessness is usually oriented toward aversive

uncontrollability, EAT presents a parallel “unearned helplessness” that arises from non-aversive but uncontrollable positive outcomes. EAT offers a coherent paradigm for understanding the motivational harm resulting from grade inflation, with real implications for educational policy and teacher training in high power-distance, competition-driven environments.

However, the qualitative findings that form the basis of the propositions are exploratory and require further empirical validation. The sample of 78 open-ended responses is relatively small, and the responses were from teachers only. The propositions would be strengthened by triangulation with student interviews and larger qualitative samples.

6. Conclusion

This study developed and provided empirical evidence for EAT through a quantitative comparison of 240 Iranian and Iraqi EFL high school teachers. Key conclusions are as follows:

1. Iranian teachers reported significantly higher frequencies of forced grade inflation and institutional pressure compared to Iraqi teachers, likely due to more intense inter-school competition in Iran. However, these findings reflect teacher perceptions and may be influenced by reporting biases.
2. Iranian students, as perceived by their teachers, showed significantly greater decreases in effort after repeated unearned success, corroborating the EAT premise of progressive effort atrophy following unearned success. These findings are based on teacher reports and should be validated with student-level data.
3. An attributional shift from internal controllable (effort) to external uncontrollable (teacher factors) significantly mediated this relationship, accounting for approximately 41% of the effect. However, the cross-sectional design limits causal inference.
4. Effort Atrophy Theory consists of four interrelated propositions, Effort-Reward Disconnection Principle, Unearned Success Saturation Effect, Attributional Corrosion Mechanism, and Effort-Reward Imbalance Amplifier that together provide a coherent account of why unearned success demotivates learners. These propositions are preliminary and require further empirical validation.

This study has several implications. Existing motivation theories (SDT, AT, EVT, LH, LI, ERI) are further strengthened by EAT, which is based on the concept that unearned success can have unique motivational implications. EAT provides a testable model for future investigations of grade inflation and

academic demotivation. However, the theory should be viewed as a framework for generating hypotheses rather than a confirmed model.

Pre-service and in-service training should recognize the discouraging influence of unearned success and guide teachers on how to counter institutional pressure to inflate grades. Professional development should focus on accurate, mastery-based assessment strategies that differentiate between effort, behavior, and academic achievement. Teachers should be equipped with skills to provide honest, constructive feedback that supports student motivation.

Schools should be aware that competition centered on inflated grade averages has the opposite effect, fostering a culture of unearned success that diminishes true student effort and learning. Policies that encourage the use of visible, externally validated test measures, such as standardized benchmarks, can help mitigate grade inflation. Accountability systems should reward genuine student achievement rather than artificially inflated grades.

Multiple authentic, low-stakes assessments that provide valid, correct feedback on competence should be incorporated into curricula. Assessment should not be reduced to a single point, the final grade, but should provide ongoing feedback that supports learning. Constructive feedback that focuses on effort and improvement can help maintain the effort-outcome contingency. In addition, several limitations should be noted:

This study relied entirely on teacher self-reports. Teachers' perceptions of student effort reduction and attributional patterns may not correspond to students' actual experiences, behaviors, or motivational states. Social desirability bias may also affect reporting, particularly regarding sensitive practices like grade inflation. Future research should include student self-reports, behavioral measures, and observational data to triangulate findings.

The cross-sectional design inhibits causal inference. While the mediation model assumes a specific causal sequence (unearned success → attribution → effort reduction), alternative pathways cannot be ruled out. Longitudinal studies are needed to establish directionality and to examine how the effects of unearned success unfold over time.

Although stratified random sampling was used, the sample may not fully represent all regions within Iran and Iraq. The samples were drawn from specific provinces and governorates, and findings may not generalize to rural areas or to regions with different educational policies. The sample size, while adequate for the quantitative analyses, may be insufficient for detecting smaller effects or for subgroup analyses.

The instruments were translated and back-translated to ensure linguistic equivalence, but cultural differences in response styles (e.g., tendencies toward extreme responses, acquiescence) may affect comparisons. Additionally, the constructs being measured, such as “effort” and “grade inflation,” may have different meanings in the Iranian and Iraqi educational contexts.

The proposed EAT is based on limited evidence from a single cross-sectional survey. The qualitative propositions, while theoretically grounded, are exploratory and require stronger empirical validation. The theory should be tested through multiple methods, including experiments, longitudinal designs, and studies in different educational contexts.

The absence of direct student data is a significant limitation. Teachers’ perceptions may be influenced by their own experiences, biases, and expectations. Students’ actual motivational states, effort levels, and attributional patterns may differ from teachers’ perceptions. Future research should collect data from both teachers and students to examine convergence and divergence in perspectives.

The findings are specific to EFL contexts in Iran and Iraq and may not generalize to other subjects, other educational levels, or other countries. Cultural factors, institutional structures, and educational policies vary widely, and the mechanisms proposed by EAT may operate differently in different contexts. Building on the current findings, future research should address the following:

1. Conduct longitudinal studies to examine the dose-response relationship between unearned success and effort atrophy over time. Such studies could establish the temporal ordering of variables and examine how the effects accumulate.
2. Integrate student surveys directly into investigations to measure students’ attributional patterns, effort levels, and motivational states. Triangulating teacher and student data would provide a more comprehensive picture of the phenomena.
3. Examine differences between public and private schools, as institutional pressures may differ. Private schools may face different market pressures, while public schools may be subject to different accountability systems.
4. Test interventions designed to restore the effort-outcome contingency. For example, mastery-based grading systems, transparent assessment criteria, and constructive feedback practices could be evaluated for their effectiveness in mitigating effort atrophy.

5. Extend the application of EAT to other high-stakes or competition-driven educational contexts beyond Iran and Iraq, such as Turkey, Pakistan, Egypt, and other countries with similar educational dynamics.
6. Conduct experimental studies that manipulate the presence of unearned success to establish causality. Random assignment to conditions with or without grade inflation would provide stronger evidence for the causal claims of EAT.
7. Use qualitative methods to capture students' lived experiences of unearned success and its motivational consequences. In-depth interviews, focus groups, and diary studies could provide richer insights into the psychological mechanisms at play.
8. Investigate moderators of the relationship between unearned success and effort reduction, such as individual differences in achievement goals, self-efficacy, and personality characteristics.
9. Explore the role of teacher beliefs and attitudes in the perpetuation of grade inflation. Understanding why teachers comply with or resist institutional pressure could inform professional development interventions.
10. Examine the long-term consequences of effort atrophy, including its effects on academic achievement, career trajectories, and lifelong learning outcomes.

7. References

- Ahmed, W., van der Werf, G., Kuyper, H., & Minnaert, A. (2013). Emotions, self-regulated learning, and achievement in mathematics: A growth curve analysis. *Journal of Educational Psychology*, 105(1), 150–161.
- Bowden, M., Rodriguez, J., & Weingarten, R. (2025). How does academic leniency affect student effort, achievement, and long-run human capital? *The Policy Scientist*.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum Press.
- Dörnyei, Z. (2001). *Motivational strategies in the language classroom*. Cambridge University Press.
- Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53, 109–132.

- Eccles, J. S., & Wigfield, A. (2020). From expectancy-value theory to situated expectancy-value theory: A developmental, social cognitive, and sociocultural perspective on motivation. *Contemporary Educational Psychology*, 61, 101859.
- Educational Leadership Research. (2025). Comparative study of formal education in Iran and Iraq. *Educational Leadership Research Journal*.
- Eisenberger, R. (1992). Learned industriousness. *Psychological Review*, 99(2), 248–267.
- Ferris-Crisafulli, J. (2022). "Even the little things matter:" A phenomenological study on factors impacting student motivation during and after COVID-related disruptions in education (Doctoral dissertation). University of South Carolina.
- Fordham Institute. (2024). Grade inflation: Why it matters and how to stop it. *The Education Gadfly Weekly*.
- Frenzel, A. C., Goetz, T., Lüdtke, O., Pekrun, R., & Sutton, R. E. (2009). Emotional transmission in the classroom: Exploring the relationship between teacher and student enjoyment. *Journal of Educational Psychology*, 101(3), 705–716.
- Frontiers in Psychology. (2024). Effort-reward imbalance and learning engagement: A meta-analytic review. *Frontiers in Psychology*, 15.
- Gao, L., & Liu, H. (2022). Revisiting students' foreign language learning demotivation: From concepts to themes. *Frontiers in Psychology*, 13, 1030634.
- Grade inflation. (n.d.). In *Oxford English Dictionary*.
- Jahedizadeh, S., Ghanizadeh, A., & Ghonsooly, B. (2016). The role of EFL teachers' emotional intelligence in their success. *Iranian Journal of Language Teaching Research*, 4(2), 65–83.
- Kohn, A. (2002). *The case against standardized testing: Raising the scores, ruining the schools*. Heinemann.
- Niemiec, C. P., & Ryan, R. M. (2009). Autonomy, competence, and relatedness in the classroom: Applying self-determination theory to educational practice. *Theory and Research in Education*, 7(2), 133–144.
- Pekrun, R. (2006). The control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. *Educational Psychology Review*, 18(4), 315–341.
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Press.

- Sakai, H., & Kikuchi, K. (2009). An analysis of demotivators in the EFL classroom. *System*, 37(1), 57–69.
- Seligman, M. E. P. (1975). *Helplessness: On depression, development, and death*. W. H. Freeman.
- Siegrist, J. (1996). Adverse health effects of high-effort/low-reward conditions. *Journal of Occupational Health Psychology*, 1(1), 27–41.
- Ware, J. E., & Williams, R. G. (1975). The Dr. Fox effect: A study of lecturer effectiveness and ratings of instruction. *Journal of Medical Education*, 50(2), 149–156.
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92(4), 548–573.
- Weiner, B. (1992). *Human motivation: Metaphors, theories, and research*. Sage.
- Wigfield, A., & Eccles, J. S. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology*, 25(1), 68–81.

Author Information

**Zahraa Mohammed Hussein (General Directorate
of Education in Wasit Governorate , Ministry of
Education)**
zah84ra@gmail.com
