

Achievement motivation as a predictor of historical empathy: a study of social studies university students

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ABSTRACT

This study investigated the predictive relationship between achievement motivation and historical empathy among social studies university students. Using the achievement motives scale-revised (AMS-R) and the historical empathy scale-adult form (HES-AF), data were collected from 428 Egyptian university students aged 18-24 from education faculties at Al-Azhar University. Correlation analyses revealed significant positive relationships between achievement motivation dimensions (hope of success and fear of failure) and all historical empathy components (cognitive, affective, and behavioral). Multiple regression analysis demonstrated that achievement motivation significantly predicted historical empathy, $F(2, 425)=86.035$, $p<.001$, explaining 28.8% of the variance. Hope of success emerged as the primary predictor ($\beta=.478$, $p<.001$), with approximately four times the predictive strength of fear of failure ($\beta=.109$, $p=.018$). These findings suggest that approach-oriented achievement motivation, particularly hope of success, is crucial in fostering empathetic understanding of historical content. The results provide theoretical insights into the psychological mechanisms underlying historical empathy and offer practical guidance for educators seeking to enhance empathetic engagement in social studies education through motivation-focused pedagogical approaches.

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1. INTRODUCTION

Social studies education at the university level is experiencing significant transformation as institutions integrate emerging teaching innovations including digital resources, project-based learning, and flipped classrooms, though technologies like augmented reality remain underutilized [1]. The challenges facing contemporary social studies education are multifaceted. Educators encounter obstacles in fostering deep historical understanding, including resource limitations and methodological gaps that hinder the connection between theoretical knowledge and practical application [2]. Students face engagement challenges from linguistic complexities, unfamiliar cultural references, and insufficient interactive, real-world connections in historical content [3]. The diverse backgrounds of learners necessitate more inclusive and contextually relevant teaching approaches, yet many faculty lack experience with student-centered

pedagogies and require professional development to implement innovative strategies [1], [4]. Historical consciousness and empathy development remain critical and require systematic curricular approaches [5].

Among the most promising pedagogical approaches in social studies education is the development of historical empathy, which represents a fundamental method that transcends traditional fact-based learning by engaging students in cognitive and affective dimensions of historical understanding [6], [7]. This essential skill enables students to comprehend historical figures' contextual factors, motivations, and emotional experiences while avoiding presentist judgments that impose contemporary values on past events [8], [9]. By fostering multiperspectivity and critical thinking capabilities, historical empathy transforms passive memorization into active interpretation, ultimately enhancing students' historical consciousness and promoting deeper engagement with complex social issues [5], [10]. The development of empathetic understanding serves as a bridge connecting past and present, enabling students to appreciate the complexity of human actions across different temporal and cultural contexts [11].

The significance of historical empathy extends beyond academic understanding. This pedagogical approach represents a fundamental component of social studies education, enabling students to transcend memorization and critically analyze past events through understanding historical actors' motives, beliefs, and emotions within their contexts [7]. Historical empathy fosters deeper historical understanding, enhances memory retention, and develops critical thinking skills by requiring students to analyze motives and consequences within appropriate historical frameworks [11]. Furthermore, it cultivates civic values, cultural understanding, and ethical reasoning, making history education more transformative and relevant to contemporary issues while helping students avoid presentism—the tendency to judge historical events by modern standards [8]. Consequently, contemporary pedagogy has increasingly emphasized historical empathy as crucial for developing civic literacy, democratic participation skills, and navigating complex social issues through targeted instructional strategies [12].

Despite its recognized importance, students encounter significant barriers when developing historical empathy due to cognitive, emotional, and contextual challenges that impede their ability to understand historical perspectives effectively [9], [13]. The temporal and experiential distance between contemporary students and historical figures creates empathetic difficulties comparable to understanding strangers, particularly challenging for young learners who may lack the abstract thinking skills necessary for contextualizing historical actions and motivations [7], [14]. Pre-existing media representations and insufficient contextual knowledge compound these challenges, often leading to biased interpretations and moral judgments based on current values rather than historical contexts [15], [16].

Previous research on historical empathy has been predominantly conducted in educational settings across North America and Europe, with emerging scholarship in Asia. Studies have been implemented in secondary and post-secondary institutions, particularly within university-based pre-service teacher programs and high school classrooms in the United States, Netherlands, Indonesia, Spain, and Canada [8], [17]–[19]. Research projects have frequently centered on local history contexts, including black cemeteries in the United States Southeast, the COVID-19 pandemic, and underrepresented historical figures, utilizing place-based and inquiry-based pedagogical approaches [10], [16].

Research demonstrates that students exhibit their highest levels of historical empathy during active, contextualized learning experiences that extend beyond traditional classroom settings, particularly through immersive inquiry-based activities such as augmented reality field trips, museum visits, and local history research projects, where they can forge emotional and cognitive connections with historical figures and contexts [6], [20]. These engagement peaks occur when students participate in community-based research or interactive museum sessions that allow deeper exploration of diverse viewpoints and personal historical connections [16]. Motivation particularly impacts empathy development when students perceive history as personally relevant to their lives or identities, with curiosity and opportunities to explore multiple perspectives as key catalysts [8], [21]. The most effective intersection of cognitive and motivational factors occurs when contextual understanding and perspective-taking abilities are strategically paired with motivational elements like personal relevance and emotional engagement, maximized through strategies including eyewitness accounts, historical site visits, and explicit discussions of positionality [13], [22].

Achievement motivation has emerged as a critical factor in student success and engagement. Achievement motivation comprises two fundamental components: i) hope of success, which reflects students' confidence and desire to achieve goals often linked to mastery orientation and self-efficacy [23], [24], and ii) fear of failure, involving anxiety and avoidance behaviors that can lead to maladaptive strategies and academic disengagement [25]. Multiple factors significantly influence students' motivation for academic success, including academic self-efficacy as a strong predictor of engagement and achievement [26], [27], academic self-concept [28], peer and teacher support systems [29], [30], need for cognition driving intrinsic motivation [24], [31], and engagement facilitators such as gamification and learning support [29], [32].

The relationship between motivation and cognitive engagement demonstrates that motivation serves as a direct antecedent of cognitive engagement, with highly motivated students more likely to engage cognitively and achieve better academic outcomes [25], [33], [34]. Cognitive engagement mediates the effect of motivation on achievement, creating a pathway where motivation enhances engagement, subsequently predicting academic success [27], [29], [35]. Research consistently demonstrates that achievement motivation serves as a robust predictor of learning outcomes, with meta-analyses revealing positive associations between both intrinsic and extrinsic motivation and academic performance, though intrinsic motivation yields more substantial and more sustained impacts [36]–[38].

In historical learning, motivated students approach complex historical content through enhanced engagement, self-regulated learning strategies, and sustained persistence when encountering challenging material, facilitating deeper comprehension and connection-making across multiple perspectives [39]–[41]. Achievement motivation, particularly intrinsic orientation, enhances perspective-taking abilities by fostering openness to diverse viewpoints and willingness to analyze historical events from multiple standpoints empathetically [42], [43]. Furthermore, mastery-oriented achievement motivation promotes deep learning processes and critical thinking, while performance-oriented motivation may drive short-term achievement but limits conceptual understanding, making intrinsic motivation essential for meaningful historical comprehension [44], [45].

Given the importance of historical empathy in social studies education and achievement motivation in learning outcomes, a compelling need exists to investigate the relationship between these two constructs. While research has examined each concept independently, limited attention has been devoted to understanding how achievement motivation might predict or influence the development of historical empathy among university students. This study aims to explore the relationship between achievement motivation and historical empathy and investigate the possibility of predicting historical empathy through achievement motivation among social studies university students. This study addresses the following research questions:

- What is the relationship between achievement motivation dimensions (hope of success and fear of failure) and historical empathy among social studies university students? (RQ1)
- To what extent can achievement motivation predict historical empathy? (RQ2)

2. METHOD

2.1. Participants

The study comprised two distinct samples: a psychometric validation and a main research sample. The psychometric validation sample consisted of 331 university students from the Faculties of Education at Al-Azhar University, including the men's campus in Tafhna Al-Ashraf and the women's campus in Cairo. Participants aged 18 to 24 ($M=20.105$, $SD=1.676$). The sample included 243 male students (73.4%) and 88 female students (26.6%), with 245 participants (74.0%) from rural backgrounds and 86 (26.0%) from urban areas. Students were distributed across academic years, with 103 first-year students (31.1%), 54 second-year students (16.3%), 50 third-year students (15.1%), and 124 fourth-year students (37.5%). The sample was further divided by specialization, with 136 geography students (41.1%) and 195 history students (58.9%). Participants were recruited using systematic sampling from the target universities.

The main research sample consisted of 428 university students from the same educational institutions, aged 18 to 24 years ($M=20.455$, $SD=1.646$). This sample included 339 male students (79.2%) and 89 female students (20.8%), with 327 participants (76.4%) from rural backgrounds and 101 (23.6%) from urban areas. The distribution across academic years showed 103 first-year students (24.1%), 55 second-year students (12.9%), 50 third-year students (11.7%), and 220 fourth-year students (51.4%). By specialization, 203 students (47.4%) were enrolled in geography programs and 225 students (52.6%) in history programs.

2.2. Instruments

The achievement motives scale-revised (AMS-R), developed by Lang and Fries [46], measures two primary achievement motivation dimensions: hope of success (5 items) and fear of failure (5 items). The scale employs a 4-point Likert format with response options ranging from strongly disagree=1 to strongly agree=4. This scale does not produce a total composite score, as the two dimensions are conceptualized as distinct motivational orientations. The original English version of the scale was translated into Arabic using a forward-backward translation procedure to ensure linguistic accuracy and cultural appropriateness for Arabic-speaking participants. Psychometric validation was required due to cross-cultural translation and contextual adaptation.

The psychometric evaluation of the AMS-R demonstrated satisfactory reliability and validity indices. Confirmatory factor analysis supported the two-factor structure with acceptable model fit statistics: chi-square to degrees of freedom ratio (χ^2/df)=2.493, goodness of fit index (GFI)=.954, adjusted goodness of

fit index (AGFI)=.926, comparative fit index (CFI)=.962, Tucker-Lewis index (TLI)=.949, and root mean square error of approximation (RMSEA)=.067 (90% confidence interval (CI): .049-.085). The hope of success subscale exhibited strong internal consistency with McDonald's omega coefficient of .859, Cronbach's alpha of .858, and average inter-item correlation of .549. The fear of failure subscale demonstrated adequate reliability with McDonald's omega of .815, Cronbach's alpha of .814, and average inter-item correlation of .468. Composite reliability values were .859 for hope of success and .784 for fear of failure, with corresponding average variance extracted values of .549 and .422, respectively.

The historical empathy scale-adult form (HES-AF) was developed by Çalışkan *et al.* [47] to assess adult learners' empathetic understanding in historical contexts. The instrument comprises 16 items distributed across three dimensions: cognitive empathy (8 items), affective empathy (5 items), and behavioral empathy (3 items). Participants respond using a 5-point Likert scale ranging from "never" to "always". The scale yields both subscale scores and a total historical empathy score. The original English version was translated into Arabic through a systematic forward-backward translation process, followed by expert review to ensure semantic equivalence and cultural appropriateness for the target population.

The HES-AF demonstrated robust psychometric properties across its three-dimensional structure. Confirmatory factor analysis revealed good model fit: $\chi^2/df=1.746$, GFI=.937, AGFI=.915, CFI=.941, TLI=.930, and RMSEA=.048 (90% CI: .036-.059). The cognitive empathy subscale showed acceptable internal consistency with McDonald's omega of .790, Cronbach's alpha of .789, and average inter-item correlation of .319 ($M=28.299$, $SD=5.666$). The affective empathy subscale demonstrated adequate reliability with McDonald's omega of .724, Cronbach's alpha of .721, and average inter-item correlation of .341. The behavioral empathy subscale exhibited satisfactory reliability with McDonald's omega of .740, Cronbach's alpha of .739, and average inter-item correlation of .486. The total HES showed strong overall reliability with McDonald's omega of .858, Cronbach's alpha of .857, and average inter-item correlation of .273 ($M=56.580$, $SD=10.460$). The composite reliability for the overall scale was .854 with an average variance extracted of .661.

2.3. Procedure

Data collection was conducted per ethical research standards and institutional approval procedures. Participants were recruited through systematic sampling from the target universities, with informed consent obtained from all participants prior to data collection. The instruments were administered in group settings within classroom environments to ensure standardized conditions. Participants completed the AMS-R and the HES-AF during single testing sessions lasting approximately 30 minutes. Clear instructions were provided regarding completing both instruments, and participants were assured of confidentiality and anonymity of their responses. The research team was available to address any questions or concerns during the data collection.

2.4. Data analysis

Data analysis was conducted using SPSS 27.0 and AMOS 26.0 software packages. Descriptive statistics and correlation analyses examined relationships between achievement motivation dimensions and historical empathy components. Multiple regression analysis investigated the predictive capacity of achievement motivation (hope of success and fear of failure) on total historical empathy scores. Significance levels were set at $p<.05$.

3. RESULTS

The correlation analysis revealed significant positive relationships between achievement motivation dimensions and historical empathy components among the 428 university students in the study sample. As presented in Table 1, hope of success demonstrated strong positive correlations with all dimensions of historical empathy, with the strongest relationship observed with behavioral empathy ($r=.534$, $p<.001$), followed by total historical empathy ($r=.528$, $p<.001$), cognitive empathy ($r=.467$, $p<.001$), and affective empathy ($r=.327$, $p<.001$). These correlations indicate that students with higher levels of hope for success tend to exhibit greater empathetic understanding across cognitive, affective, and behavioral dimensions when engaging with historical content. The magnitude of these correlations suggests meaningful relationships that warrant further investigation through predictive modeling.

Fear of failure also demonstrated significant positive correlations with all historical empathy dimensions, though these relationships were generally weaker than those observed with hope of success. The correlations ranged from .249 (fear of failure with affective empathy) to .328 (fear of failure with total historical empathy), all reaching statistical significance at $p<.001$. Interestingly, the moderate positive correlation between hope of success and fear of failure ($r=.456$, $p<.001$) suggests that these two achievement

motivation dimensions are not independent constructs, as students may simultaneously experience both approach and avoidance motivational tendencies. The intercorrelations among historical empathy dimensions were substantial, with cognitive empathy showing the strongest relationship with total historical empathy ($r=.887$, $p<.001$), followed by affective empathy ($r=.793$, $p<.001$) and behavioral empathy ($r=.768$, $p<.001$), confirming the multidimensional yet cohesive nature of historical empathy as measured by the HES-AF.

Table 1. Correlations between achievement motivation dimensions and historical empathy components

Variable	M	SD	1	2	3	4	5	6
1. Hope of success	15.420	2.909	1					
2. Fear of failure	14.321	2.730	.456**	1				
3. Cognitive empathy	28.369	5.532	.467**	.279**	1			
4. Affective empathy	17.140	4.010	.327**	.249**	.500**	1		
5. Behavioral empathy	11.007	2.909	.534**	.290**	.556**	.484**	1	
6. Total historical empathy	56.616	10.318	.528**	.328**	.887**	.793**	.768**	1

Note: ** $p<.01$; M=mean; SD=standard deviation

Multiple regression analysis examined the predictive capacity of achievement motivation dimensions on total historical empathy scores. The results, as summarized in Table 2, indicate that the combination of hope of success and fear of failure significantly predicted historical empathy, $F(2, 425)=86.035$, $p<.001$. The model explained 28.8% of the variance in historical empathy scores ($R^2=.288$, adjusted $R^2=.285$), suggesting that achievement motivation represents a meaningful predictor of empathetic understanding in historical contexts. The standard error (SE) of the estimate was 8.73, indicating reasonable precision in predicting historical empathy scores from achievement motivation variables.

Table 2. Multiple regression analysis summary: achievement motivation predicting historical empathy

Model	R	R ²	Adjusted R ²	SE	F	df	p
1	.537	.288	.285	8.726	86.035	2	<.001

Note: SE=standard error; Predictors: hope of success, fear of failure; dependent variable: total historical empathy.

Examining individual predictor contributions revealed differential effects of the two achievement motivation dimensions on historical empathy. As shown in Table 3, hope of success emerged as the primary predictor, contributing significantly to the regression model ($\beta=.478$, $t=10.391$, $p<.001$), with an unstandardized coefficient of 1.695 (SE=.163). This finding indicates that for each unit increase in hope of success scores, historical empathy is predicted to increase by approximately 1.7 points, controlling for fear of failure. Fear of failure also contributed significantly but more modestly to the prediction of historical empathy ($\beta=.109$, $t=2.380$, $p=.018$), with an unstandardized coefficient of .414 (SE=.174). The standardized beta coefficients reveal that hope of success has approximately four times the predictive strength of fear of failure in explaining historical empathy variance, highlighting the importance of approach-oriented achievement motivation in fostering empathetic historical understanding.

Table 3. Regression coefficients for achievement motivation predicting historical empathy

Predictor	B	SE	β	t	p
Constant	24.554	2.643	-	9.290	<.001
Hope of success	1.695	.163	.478	10.391	<.001
Fear of failure	.414	.174	.109	2.380	.018

Dependent variable: total historical empathy; B=unstandardized coefficient; SE=standard error; β =standardized coefficient.

The regression analysis demonstrates that both dimensions of achievement motivation contribute uniquely to predicting historical empathy, though with markedly different effect sizes. The significant positive coefficient for hope of success aligns with theoretical expectations that approach-oriented motivation facilitates deeper engagement with learning materials and promotes perspective-taking abilities essential for empathetic understanding. Fear of failure is a smaller but significant contribution, suggesting that even avoidance-oriented motivation may play a role in historical empathy development, possibly through heightened attention to historical details or increased effort to avoid academic failure. The model's ability to explain nearly 29% of the variance in historical empathy represents a substantial contribution, particularly given the complex nature of empathetic responses and the multitude of factors that could potentially influence historical understanding among university students.

4. DISCUSSION

The findings of this study provide compelling evidence for the predictive relationship between achievement motivation and historical empathy among social studies university students. The significant positive correlations between dimensions of achievement motivation and all components of historical empathy demonstrate that motivational orientations play a crucial role in students' capacity to engage empathetically with historical content. These results align with contemporary educational psychology theories that emphasize the interconnected nature of motivation and engagement in academic contexts.

The stronger predictive relationship of hope of success with historical empathy compared to fear of failure can be attributed to fundamental differences in motivational orientation and their subsequent effects on learning processes. Hope of success represents an approach-oriented motivational system that energizes students toward mastery, engagement, and positive affect, foundational prerequisites for empathetic understanding [48], [49]. This approach motivation fosters cognitive flexibility, resilience, and openness to diverse perspectives—core components essential for historical empathy development [50], [51]. Students characterized by high hope of success demonstrate greater willingness to engage with challenging historical material, persist through complex narratives, and actively seek understanding of historical actors' experiences and motivations [52], [53].

The multiple regression analysis, revealing that achievement motivation explains 28.8% of the variance in historical empathy, represents a substantial contribution to understanding factors that influence empathetic historical understanding. Research consistently demonstrates that fear-driven motivation leads to self-handicapping behaviors, emotional distress, and reduced willingness to engage with complex or challenging material—all factors that undermine perspective-taking abilities central to historical empathy [54], [55]. While fear of failure may motivate academic effort, its effects are generally less adaptive and more context-dependent than hope of success, as fear-based motivation tends to narrow attentional focus and reduce the cognitive flexibility required for understanding multiple historical perspectives [56].

The differential predictive strength of the two achievement motivation dimensions has important theoretical implications for understanding the psychological mechanisms underlying historical empathy development. The four-fold stronger predictive capacity of hope of success compared to fear of failure suggests that fostering approach-oriented achievement motivation should be prioritized in educational interventions designed to enhance historical empathy. From a pedagogical perspective, these results suggest that social studies educators should focus on creating learning environments that cultivate hope of success rather than relying on fear of failure as a motivational strategy. Educational practices that enhance students' confidence in their ability to succeed, provide meaningful choices, and emphasize mastery over performance will likely yield greater improvements in historical empathy. The practical implications of this research extend beyond the immediate educational context to encompass broader societal goals related to civic education and democratic participation, as historical empathy serves as a foundation for critical thinking about contemporary social issues, cultural understanding, and ethical reasoning.

Several limitations should be acknowledged when interpreting the findings of this study. First, the cross-sectional design precludes causal inferences about the relationship between achievement motivation and historical empathy, as the directionality of influence cannot be definitively established. Students with higher historical empathy may develop stronger achievement motivation, or unmeasured third variables influence both constructs simultaneously. Second, the sample was limited to Egyptian university students from specific institutions, which may limit the generalizability of findings to other cultural contexts, educational systems, or age groups. Third, reliance on self-report measures introduces potential for social desirability bias and method variance, which may have inflated observed correlations between achievement motivation and historical empathy. Finally, while the study explained 28.8% of the variance in historical empathy, a substantial portion remains unexplained, suggesting other important predictors were not included.

Future research should explore the causal relationships between achievement motivation and historical empathy over time, using longitudinal studies with multiple measurement points. Cross-cultural validation studies in diverse educational contexts could reveal potential cultural variations in the relationship. Experimental designs implementing motivation-enhancement interventions could provide direct evidence for the causal impact of achievement motivation on historical empathy development. Objective measures of empathetic understanding, such as behavioral observations or performance-based assessments, could complement self-report instruments. Investigating potential mediating mechanisms, such as cognitive engagement or emotional regulation, could advance theoretical understanding of how achievement motivation influences empathetic capacity.

5. CONCLUSION

This study contributes significantly to understanding the relationship between achievement motivation and historical empathy among university students in social studies education. The findings demonstrate that achievement motivation, particularly hope of success, is a meaningful predictor of students' capacity for empathetic engagement with historical content. The results provide theoretical insights into the psychological mechanisms underlying historical empathy and practical guidance for educators seeking to enhance empathetic understanding in their students. By identifying achievement motivation as a significant predictor of historical empathy, this research offers a foundation for developing more effective pedagogical approaches that improve academic outcomes and contribute to forming engaged and empathetic citizens. The implications extend beyond immediate educational contexts to encompass broader societal goals related to civic education, democratic participation, and the development of citizens capable of understanding diverse perspectives and engaging constructively with complex social issues. Future research building on these findings has the potential to illuminate further the mechanisms underlying empathetic historical understanding and inform evidence-based practices in social studies education.

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AUTHOR CONTRIBUTIONS STATEMENT

This journal uses the Contributor Roles Taxonomy (CRediT) to recognize individual author contributions, reduce authorship disputes, and facilitate collaboration.

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C : Conceptualization

M : Methodology

So : Software

Va : Validation

Fo : Formal analysis

I : Investigation

R : Resources

D : Data Curation

O : Writing - Original Draft

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Vi : Visualization

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P : Project administration

Fu : Funding acquisition

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest related to this study.

INFORMED CONSENT

This study adhered to ethical standards, obtaining informed consent from parents, students, and institutional review boards. Privacy was maintained, and participants were informed about data collection procedures and voluntary participation. They could withdraw at any time without penalty.

ETHICAL APPROVAL

The study protocol was approved by the Research Ethics Committee of the Faculty of Education, Al-Azhar University, Egypt (Ref. No. EDU-REC-2025-067).

DATA AVAILABILITY

The data that support the findings of this study are available from the corresponding author, [MNA-D], upon reasonable request.




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