

The Curiosity-Driven Path to Entrepreneurial Success: Harnessing Creativity and Playful Work Design

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Abstract

This paper aims to investigate the outcomes of epistemic curiosity on entrepreneurial success, focusing on the sequential mediating roles of creative ideas and playful work design. A sample of 273 entrepreneurs and managers was selected using a simple random sampling technique. Data was gathered from startup owners and senior management of SMEs in the twin cities and analysed through correlation, reliability, and regression using SPSS. The theoretical model was further examined through CFA and hypothesis testing via AMOS. The results indicate that epistemic curiosity significantly and positively affects entrepreneurial success, mediated sequentially by creative ideas and playful work design. Entrepreneurs with higher curiosity levels tend to generate more innovative ideas, which, when coupled with a playful work environment, markedly enhance their success potential. This study is limited to SMEs in twin cities, which may affect generalizability to broader entrepreneurial contexts. Further research could explore similar relationships in varied cultural and industry settings. The findings provide actionable insights for entrepreneurs, managers, and policymakers on fostering curiosity-driven environments that promote creativity and enhance business success. Emphasizing epistemic curiosity can lead to an innovative-driven workplace culture, contributing to sustained competitive advantage. This study offers a novel perspective by elucidating the sequential mediating effects of creative ideas and playful work design on the relationship between curiosity and entrepreneurial success, adding valuable insights into the role of curiosity in entrepreneurial environments.

Keywords: Epistemic Curiosity, Entrepreneurial Success, Creative Ideas, Playful Work Design, SMEs, Creativity, Startups

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1 Introduction

Curiosity, defined as the intrinsic drive to explore, learn, and seek new experiences, significantly impacts cognitive and behavioral outcomes (Ishaq et al., [2021](#)). Epistemic curiosity, characterized by the pursuit of knowledge and exploration, has garnered attention for its role in individual and organizational success (Hassan et al., [2021](#)). While curiosity is well-documented for enhancing innovative thinking and workplace performance (Sarac et al., [2022](#); Schutte & Malouff, [2020](#)), its role in entrepreneurship remains underexplored. Specifically, how epistemic curiosity influences entrepreneurial success and the pathways through which it operates are not fully understood (Adeel et al., [2019](#)).

Most studies neglect how curiosity fosters adaptability, innovation, and resilience—key traits for entrepreneurial success (Adiningrum, [2021](#); Schutte & Malouff, [2020](#)). This study addresses this gap by investigating the sequential mediating roles of creative ideas and playful work design (PWD) in the relationship between epistemic curiosity and entrepreneurial success (Gino, [2018](#); Hassan et al., [2021](#)). By exploring these mechanisms, it seeks to enhance understanding of curiosity as a driver of entrepreneurial achievement and provide actionable insights for entrepreneurs (Heinemann et al., [2022](#)).

Epistemic curiosity promotes behaviors vital to entrepreneurship, including generating and implementing innovative ideas, navigating uncertainty, and maintaining engagement (Dean et al., [2006](#); Hassan et al., [2021](#)). Curiosity encourages a proactive approach to problem-solving, fostering adaptability and innovation (Gross et al., [2020](#); Gino, [2018](#)). Additionally, PWD—a mechanism where entrepreneurs incorporate enjoyment and challenge into their work environment—plays a crucial role in sustaining creativity and productivity. PWD creates environments that support curiosity-driven innovation, emphasizing the significance of crafting engaging work experiences (Scharp et al., [2019](#)). These behaviors collectively enhance entrepreneurial outcomes, as curiosity motivates entrepreneurs to explore, innovate, and persist (George & Zhou, [2001](#)).

This research draws on Berlyne's Theory of Human Curiosity, which posits that curiosity stimulates exploration and learning, driving behaviors that capitalize on new opportunities (Arikan et al., [2020](#); Berlyne, [1954](#)). Berlyne distinguished four types of curiosity: epistemic-cognitive (the desire for information), perceptual-sensory (attention to new stimuli), particular-absorption (concentration on specific observations), and diversive-exploration (Jeraj & Marič, [2013](#)) (seeking stimulation to avoid boredom). Entrepreneurs frequently exhibit all of these dimensions, with epistemic and particular curiosity driving their quest for new knowledge and creative ideas critical to innovation and problem-solving (Hassan et al., [2021](#)). Perceptual and diversive curiosity encourages inquiry and fun rethinking of job tasks, hence boosting motivation and creativity (Gino, [2018](#)). Together, these curiosity-driven behaviors lay the groundwork for entrepreneurial success, particularly in dynamic and uncertain settings like Pakistan (Crowther et al., [2018](#)).

Prior studies highlight the impact of curiosity on entrepreneurial traits and success. For example, diversive curiosity enhances problem-solving, and epistemic curiosity strengthens entrepreneurial leadership's influence on innovation (Hardy et al., [2017](#); Khan, [2023](#)). However, little research has investigated how creative ideas and PWD mediate this relationship. By examining these mediators, this study addresses a critical gap, showing how epistemic curiosity fosters entrepreneurial success beyond traditional metrics like financial performance (Raine & Pandya, [2019](#)).

The study's focus on SMEs in Pakistan provides valuable insights into entrepreneurship in a unique context (Alroaia & Baharun, [2018](#)). Entrepreneurs in Pakistan face distinct challenges compared to their Western counterparts, such as resource constraints and uncertain environments, which make curiosity-driven behaviors even more critical (Hu et al., [2022](#); Schutte & Malouff, [2020](#)). This research contributes to the literature by examining how curiosity influences entrepreneurial

success, offering practical strategies for entrepreneurs, incubators, and mentors. Entrepreneurs intrinsically motivated by curiosity exhibit determination and resilience, navigating uncertainty while fostering innovation and growth (Lievens et al., [2022](#); Staniewski & Awruk, [2021](#)). By exploring the mediating roles of creative ideas and PWD, the study provides theoretical advancements and practical applications for fostering entrepreneurship in dynamic business environments.

2 Theoretical Framework

2.1 Context

Entrepreneurship in Pakistan, particularly in cities like Islamabad and Rawalpindi, faces challenges such as limited resources and market uncertainty. In this context, epistemic curiosity, the drive to seek new knowledge, plays a critical role in fostering creativity and innovation among entrepreneurs. This study explores how curiosity influences (Gino, [2018](#)) entrepreneurial success through the mediating effects of creative ideas and playful work design (Liu et al., [2023](#)). By examining this relationship within Pakistan's startup and SME sectors, the research highlights the importance of cultivating curiosity-driven environments to drive business growth and success (Gino, [2018](#)).

2.2 Epistemic Curiosity and Entrepreneurial Success

The Theory of Human Curiosity (Berlyne, [1954](#)) identifies curiosity as a fundamental driver of human behavior, with key dimensions such as Epistemic-Cognitive (knowledge-seeking) and Diversive-Exploration (stimuli-seeking) that support personal and entrepreneurial growth (Litman & Spielberger, [2003](#)). This study applies Berlyne's framework to explore how these curiosity dimensions contribute to entrepreneurial success (Staniewski & Awruk, [2021](#)). Epistemic Curiosity (EC) is defined as an intrinsic desire for knowledge, fostering intellectual exploration and creativity (Heinemann et al., [2022](#)). EC drives innovation and problem-solving, which are vital not only in academic settings but also in business, as entrepreneurs with high EC can identify novel opportunities and creatively address challenges (Lievens et al., [2022](#)). Despite its importance, the role of EC in entrepreneurship remains underexplored.

In entrepreneurship, EC is essential to acquiring knowledge, making decisions, and dealing with uncertainty (Hatak & Zhou, [2021](#); Yan, [2020](#)). It prompting people to seek answers (Ishaq et al., [2021](#)). Curious entrepreneurs ask new questions, discover emerging opportunities (Douglas et al., [2021](#)), and exhibit adaptation, resilience, and foresight all of which are necessary for success (Rudolph et al., [2017](#)). EC also promotes creativity and problem-solving in complex, competitive markets (Hueso et al., [2021](#)). Cross-cultural research indicates that societal norms and cultural intelligence influence how EC is manifested and how it affects outcomes. Peljko and Antoni ([2022](#)) discovered that although EC positively affect innovation and business growth in Slovenia, Latvia, and Serbia, the strength of these effects varied by cultural context.

Chaves-Maza and Fedriani's ([2022](#)) recent work increases our understanding of entrepreneurial success by introducing a multidimensional, objective model that assesses success through three key lenses: positioning (market stance), expectations (goal achievement), and evolution (growth over time). Their algorithmic method, based on decision trees, defines success beyond financial outcomes, stressing the entrepreneur's ability to satisfy personal and professional goals while adapting to a changing environment (Staniewski & Awruk, [2021](#)). This study relies on such multidimensional viewpoints by acknowledging that Epistemic Curiosity may play an important role in determining all three components of entrepreneurial success (Hassan et al., [2021](#)).

For instance, Curiosity-D, or curiosity arising from deprivation, has been shown to enhance entrepreneurial orientation, particularly among impulsive individuals (Boada-Grau et al., [2021](#)). This finding aligns with research showing that curiosity not only promotes intellectual growth but

also strengthens an entrepreneur's ability to innovate and remain resilient, contributing to both personal and business success. While curiosity has long been associated with entrepreneurial achievement, the specific mechanisms through which it influences success are still being explored. This study aims to expand the understanding of how EC, alongside creativity and commitment, serves as a fundamental driver of entrepreneurship.

H1: *Epistemic Curiosity is positively related to entrepreneurial success.*

2.3 Relationship between Epistemic Curiosity & Creative Ideas

Creativity is a multifaceted quality linked to situations, processes, individuals, or products (Gonçalves & Cash, 2021). Creative environments generate ideas that are not only original but also practical and relevant, offering innovative yet feasible solutions (Friis-Olivarius & Christensen, 2019). This research frames creativity as the ability to produce ideas that address specific issues while being novel and applicable, aligning with organizational goals to motivate employees toward originality (Lu et al., 2019). Defined by novelty and usefulness, creative ideas stand out within an organization and offer tangible benefits, ranging from radical innovations to incremental process improvements (Litchfield et al., 2015; Mumford & McIntosh, 2017). Creativity can emerge at any level within an organization, provided individuals generate novel and useful concepts. Knowledge acquisition serves as a crucial precursor to creativity, supported by findings linking curiosity to creative output. Epistemic curiosity, which drives knowledge-seeking, is particularly significant in this context (Hardy et al., 2017).

Both perceptual curiosity (desire for sensory experiences) and epistemic curiosity (desire for knowledge) contribute to creative traits, such as problem-solving and artistic endeavors (Gonçalves & Cash, 2021). Concept linking—building on elements from past ideas—further enhances creativity by fostering innovative connections (Hagtvedt et al., 2019). Epistemic beliefs about complexity positively influence intellectual risk-taking and innovation, even though certainty in beliefs does not strongly predict creativity (Wan et al., 2021). Curiosity, especially epistemic curiosity, plays a vital role in managing workplace complexity, driving both individual and organizational success (Hardy et al., 2017). These findings emphasize epistemic curiosity as a critical driver of creativity, proposing that it has a positive correlation with generating innovative ideas. This study hypothesizes that epistemic curiosity positively influences creativity.

H2: *Epistemic Curiosity is positively related to Creative Ideas.*

2.4 Relationship between Creative Ideas and Playful Work Design

Creativity is increasingly recognized as a strategic resource for organizational success, with companies often recruiting individuals who are more likely to generate practical, innovative ideas. Recent research highlights that entrepreneurs, in particular, demonstrate higher creativity when they incorporate enjoyment and engagement into their work, which has become a subject of academic interest (Bakker et al., 2020; Litchfield et al., 2015). While prior studies have examined how workplace playfulness can encourage creativity, this study explores a specific approach: Playful Work Design (PWD) (Liu et al., 2023). PWD involves entrepreneurs intentionally creating a fun, challenging work environment—such as adding humor to meetings or setting engaging deadlines—without changing the core nature of tasks (Bakker et al., 2020).

PWD is defined by two primary categories of play: ludic (spontaneity, fantasy, humor) and agonistic (goals, rules, competition), blending elements from proactive work practices and play literature to enhance engagement. Ludic elements create entertainment, while agonistic elements establish competition and challenge. Entrepreneurs utilize ludic elements to foster enjoyment, while agonistic components, like set challenges, can make tasks more stimulating. PWD enables entrepreneurs to shape their work environment intentionally, creating an atmosphere that promotes both lightheartedness and productivity (Bakker et al., 2020). This dual approach supports creative

thinking by allowing individuals to explore innovative solutions without typical constraints, fostering cognitive, emotional, and motivational engagement in the creative process (Petelczyc et al., [2018](#)).

Research indicates PWD's potential to improve well-being, engagement, and creativity, especially for those inclined toward openness and playfulness. Scholars have found that PWD enhances work engagement and positive affect, critical factors in nurturing creativity, as it provides a space for experimentation and exploration of new ideas (Mueller et al., [2012](#); Petrescu, [2018](#)). Given these findings, a positive relationship between creative ideas and playful work design is inferred, leading to the following hypothesis:

H3: *Creative Ideas are positively related to Playful Work Design.*

2.5 Relationship between Playful Work Design & Entrepreneurial Success

Playful Work Design (PWD) enables workers to integrate enjoyable and personally challenging elements into their tasks without changing the fundamental job structure, creating a more engaging work experience (Bakker et al., [2020](#); Liu et al., [2023](#)). Entrepreneurs who adopt PWD often infuse humor, friendly competition, and interactive challenges into their work, which enhances enjoyment and motivation. Scharp et al. ([2022](#)) categorize PWD into two core components: designing for play, which boosts a sense of connection and belonging, and designing for competition, which strengthens feelings of achievement and competence. Together, these elements fulfill the psychological needs of autonomy, relatedness, and competence, making PWD a dynamic approach to increasing engagement and motivation.

PWD has shown potential for enhancing daily performance and well-being by allowing individuals to optimize their work experience through personal initiative (George & Zhou, [2001](#)). Bakker et al. ([2020](#)) found that workers could adjust their job characteristics daily to better match their needs, improving both job satisfaction and performance outcomes. Tang et al. ([2020](#)) study of naval cadets demonstrated the benefits of PWD, such as increased job resources and job challenges, in enhancing daily performance. The researchers noted that strategies like PWD are more effective when paired with manageable work demands, offering a nuanced understanding of how play and challenge influence job performance within varying daily pressures. In the context of entrepreneurship (Hatak & Zhou, [2021](#)), PWD not only fosters creativity but also contributes to a motivating, collaborative workplace culture that supports innovation and problem-solving. Incorporating playful activities like brainstorming sessions, gamified tasks, and team-building exercises can promote teamwork and flexibility in addressing challenges (Ishaq et al., [2021](#); Mueller et al., [2012](#)). By enhancing intrinsic motivation, reducing stress, and promoting job satisfaction, PWD can directly impact entrepreneurial success, allowing entrepreneurs to thrive under high engagement and well-being (Bakker et al., [2020](#)). Thus, based on existing research, this study proposes that:

H4: *Playful Work Design is positively related to Entrepreneurial Success.*

2.6 Sequential Mediating Role of Creative Ideas and PWD

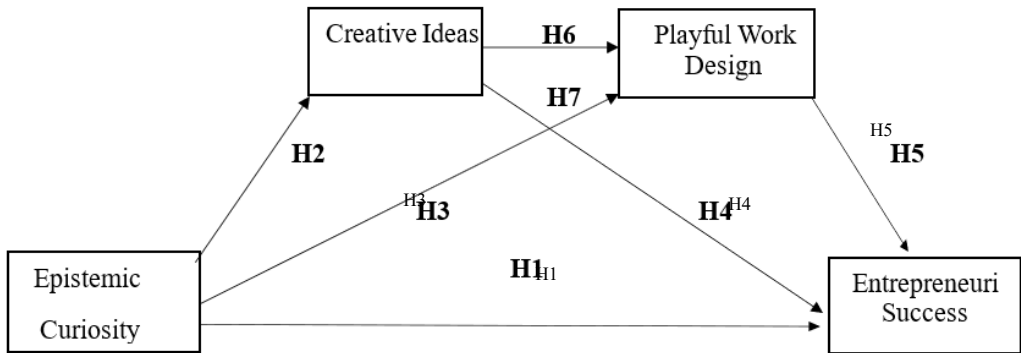
The sequential mediating roles of Creative Ideas (CI) and Playful Work Design (PWD) are integral in linking Epistemic Curiosity (EC) to Entrepreneurial Success (ES), as both mechanisms provide distinct pathways for transforming curiosity into impactful outcomes (Litchfield et al., [2015](#); Liu et al., [2023](#)). Creative ideas represent the genesis of innovation, serving as the foundation for novel solutions, products, and technologies. EC, driven by knowledge acquisition and specific curiosity, fosters creativity by enabling individuals to adapt to uncertainty and generate original solutions (Hardy et al., [2017](#); Gross et al., [2020](#)). Entrepreneurs leverage this creativity to spark ventures that align with innovative mindsets. Moreover, creativity mediates the relationship between EC and ES by translating curiosity-driven knowledge into actionable entrepreneurial outputs, as

research supports that diversive curiosity leads to problem-solving and entrepreneurial leadership to innovation through curiosity (Hardy et al., 2017; Khan, 2023; Wan et al., 2021).

Simultaneously, PWD complements creativity by embedding enjoyment and challenge into the work environment, enhancing engagement, and fostering innovative outcomes. Entrepreneurs craft playful yet purposeful work settings that satisfy motivational drives and enable autonomy, bolstered by leader autonomy support and meaningful work experiences (Bakker et al., 2020; Khan, 2023). By integrating EC into PWD, entrepreneurs create environments conducive to innovation and sustained productivity, amplifying the EC-ES connection (Bakker et al., 2020). Literature underscores how PWD mediates this relationship by fostering proactive, curiosity-driven behaviors that enhance creative ideation and entrepreneurial success (Berlyne, 1954; Khan, 2023). Together, CI and PWD illustrate the dynamic interplay of curiosity, creativity, and playful work in driving entrepreneurial success.

H5: *The relationship between Epistemic Curiosity and entrepreneurial success is sequentially mediated by creative ideas and playful work design.*

3 Research Model



4 Methods and procedures

This study uses a quantitative, cross-sectional design to examine the impact of epistemic curiosity on entrepreneurial success in Pakistani SMEs and startups, with creative ideas and playful work design as mediators (Litchfield et al., 2015; Syed et al., 2020). Data were collected from entrepreneurs and senior management of NIC-sponsored and IIUI BIC-sponsored startups in Islamabad and Rawalpindi. Twin cities were chosen because of their accessibility, resource constraints, and relevance to the study. These twin cities are home to an increasing number of technology-focused businesses and incubators, notably the NIC, which provides access to a concentrated community of early-stage entrepreneurs actively engaged in innovation. A total of 320 questionnaires were distributed, yielding 295 responses, with 273 valid responses and an 85% response rate. Self-administered and online questionnaires ensured convenience and higher participation, maintaining respondent confidentiality. This approach provided valuable insights into the entrepreneurial ecosystem in Pakistan (Syed et al., 2020).

4.1 Measures

Adopted questionnaires were employed to collect data from a variety of sources. The questionnaire comprised two sections. Section one included items about respondent's demographics (gender, age, work experience), and the second section includes a 5-sub section which includes items for the independent variable (Epistemic Curiosity), dependent variable (Entrepreneurial Success),

mediating variables (Creative Ideas and Playful Work Design), and moderator (Openness to Experience).

4.1.1. Epistemic Curiosity

To measure Epistemic Curiosity, the Work-Related Curiosity Scale WORCS developed by Mussel et al. (2011) was used. A sample item includes “I am interested in how my contribution impacts the company. It has a four-point Likert scale from 1 (almost never) to 4 (almost always) of Litman et al. (2005).

4.1.2. Entrepreneurial Success

To assess entrepreneurial success, a scale developed by Rahman et al. (2015) was used, it included 9 items. Participants rated themselves on a scale ranging from 1 = Disagree Strongly to 5 = Agree Strongly. A sample item includes “This business is contributing to community development.”

4.1.3. Creative Ideas

Creative ideation was assessed with a three-item scale developed by Thrash et al. (2010). Items were rated on a scale from 1 (never) to 5 (Quite often). A sample item includes “How frequently did you come up with novel plans or goals?”

4.1.4. Playful Work Design

PWD was assessed through the PWD scale developed by Scharp et al. (2019). All scales record the respondent’s responses on the five-point Likert scale (5= strongly agree, 4 =agree, 3 = neither agree nor disagree, 2 =disagree, 1= strongly disagree). A sample item includes “Today, I approached my tasks creatively to make them more interesting.”

Table 1: Measurement Sources and Number of Items for Study Variables

Variables	Source	No. of Items
Epistemic Curiosity	WORCS; Mussel et al. (2011)	10
Entrepreneurial Success	Rahman et al. (2015)	9
Creative Ideas	Thrash et al. (2010)	3
Playful Work Design	Scharp et al. (2019)	12

5 Data Analysis

The analysis for this study was conducted in three stages. First, demographic data, scale reliability, and variable correlations were assessed. Second, confirmatory factor analysis (CFA) verified model fit and construct distinctiveness. Third, path analysis was performed to test the hypotheses, and mediation effects were examined using Preacher and Hayes Model 6.

5.1 Results

5.1.1. Demographic statistics

Of 273 respondents, 61.2% were male, and 38.8% female. The majority (49.5%) were aged 21-30, and 54.2% held a bachelor’s degree. Work experience varied, with 38.5% having 2+ to 5 years. Most respondents (41.8%) were Owners/CEOs.

5.1.2. Descriptive Statistics

Using SPSS, Table II presents the means, standard deviations, and correlations. Epistemic Curiosity (IV) had a mean of 3.44 (S.D. 0.41), Entrepreneurial Success (DV) a mean of 4.03 (S.D. 3.90), Creative Ideas (Med1) 3.79 (S.D. 0.74), and Playful Work Design (Med2) 3.90 (S.D. 0.58). Cronbach's alpha exceeded 0.70 for all constructs, confirming reliability (Hair, 2006).

Table 2: Descriptive Statistics, Correlations, and Reliability Coefficients

Variables	Mean	SD	EC	CI	PWD	ES
Epistemic Curiosity	3.44	.41	(.85)			
Creative Ideas	3.79	.74	.30**	(.71)		
Playful Work Design	3.90	.58	.34**	.46**	(.89)	
Entrepreneurial Success	4.03	.56	.41**	.51**	.50**	(.87)

Notes: N = 273; **p < 0.01. Cronbach alpha is provided in italics Source: Produced by authors (self-work)

Correlation analysis revealed that EC and ES were positively correlated ($r = 0.411^{**}$, $p < 0.01$), suggesting higher epistemic curiosity is associated with greater entrepreneurial success. Creative Ideas ($r = 0.309^{**}$, $p < 0.01$) and PWD ($r = 0.349^{**}$, $p < 0.01$) showed moderate positive correlations with Epistemic Curiosity, indicating that higher epistemic curiosity is linked to generating more creative ideas and fostering playful work design.

5.1.3. Control Variables

Table 3: ANOVA Results for Control Variables

Control Variables	F	Sig.
Gender	0.26	0.60
Age	1.26	0.28
Education	0.06	0.93
Experience	0.90	0.46
Current Position	0.51	0.67

For control variables, a one-way ANOVA test was applied (Table III) to see the impact of demographic variables on the dependent variable. The one-way ANOVA results indicate that none of the control variables—gender, age, education, experience, and current position significantly impact entrepreneurial success, as all p-values exceed the 0.05 threshold (Murnieks et al., 2020).

5.1.4. Confirmatory factor analysis

The scales were validated by assessing their validity and reliability. The acceptable reliability criteria, as indicated by Cronbach's alpha, were met for each variable in the study. To evaluate the convergent validity of the measurement items, we employed confirmatory factor analysis (CFA) using Amos 23 software. The results from the measurement model (refer to Table IV) revealed strong fit statistics, with a CMIN/DF of 1.72. The Tucker-Lewis Index (TLI) was 0.89, while the Comparative Fit Index (CFI) stood at 0.90, and the Index of Relative Fit (IFI) was also 0.90. Based on these findings, we proceeded to test our hypotheses.

Table 4: Model Fit Indices for the Three-Factor Model

Models	CMIN/DF	CFI	TLI	IFI
3 Factor Model	1.72	0.905	0.897	0.906

Notes: CFI = comparative fit index; TLI = Tucker–Lewis’s index; IFI = Incremental Fit Index;

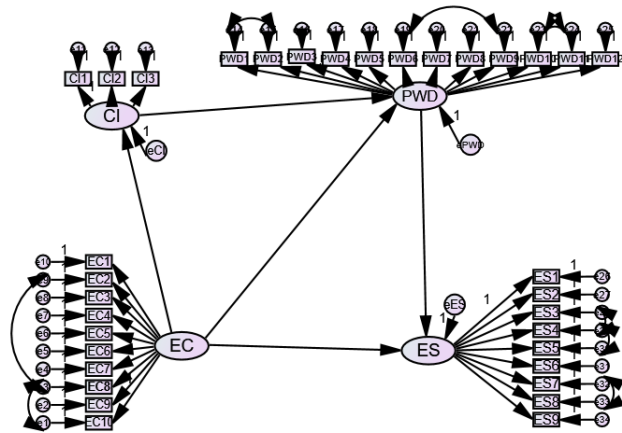


Figure 2: Structural Equation Model (SEM) diagram

5.1.5. Statistical Path Analysis

This study used multiple regression and Hayes' (2013) Process macro (model 6) to analyze the mediating effect. Regression results (Table V) showed Epistemic Curiosity positively influenced Entrepreneurial Success ($\beta = .17, p < .01$), Creative Ideas ($\beta = .25, p < .01$), and Playful Work Design (via Creative Ideas; $\beta = .41, p < .01$), supporting Hypotheses 1, 2, and 3. PWD positively affected ES ($\beta = .25, p < .01$), supporting Hypothesis 4. Mediation analyses confirmed the roles of Creative Ideas ($\beta = .41, p < .01$) and Playful Work Design ($\beta = .258, p < .01$) in their respective relationships, validating Hypotheses 5 and 6. Sequential mediation from Epistemic Curiosity to Entrepreneurial Success via Creative Ideas and Playful Work Design ($\beta = .02, p < .01$) supported Hypothesis 7.

Table V

Direct Effect	B	S. E	P	LLCI	ULCI
Epistemic Curiosity → Entrepreneurial Success	.17	.04	.00	.09	.25
Epistemic Curiosity → Creative Ideas	.25	.04	.00	.16	.35
Epistemic Curiosity → Playful Work Design	.20	.04	.00	.10	.30
Creative Ideas → Playful Work Design	.41	.05	.00	.30	.53
Creative Ideas → Entrepreneurial Success	.30	.05	.00	.19	.40
Playful Work Design → Entrepreneurial Success	.25	.05	.00	.15	.35
Indirect Effect	B	S.E	P	LLCI	ULCI
Epistemic Curiosity → Creative Ideas → Entrepreneurial Success	.07	.03	.00	.02	.14
Epistemic Curiosity → Playful Work Design → Entrepreneurial Success	.05	.01	.00	.01	.09
Epistemic Curiosity → Entrepreneurial Success					

Creative Ideas →	.02	.01	.00	.00	.05
Playful Work Design →					
Entrepreneurial Success					

Notes: N = 273; LL = lower limit; UL = upper limit; S.E = standard error

Source: Produced by authors (self-work)

6 Discussion

This study explored the relationship between epistemic curiosity and entrepreneurial success, highlighting the mediating roles of creative ideas and playful work design (Litchfield et al., 2015). The data supported all eight hypotheses, showing that epistemic curiosity significantly predicts entrepreneurial success. This aligns with Heinemann et al. (2022), who noted curiosity as essential for entrepreneurial growth. In the context of Pakistan, where entrepreneurship is seen as a key driver for economic development (Hatak & Zhou, 2021), curiosity can help entrepreneurs adapt to a competitive and evolving market. Curiosity was positively linked to creative ideas, confirming Raine and Pandya's (2019) view that curiosity and creativity are essential for entrepreneurial success. In Pakistan, where businesses often face resource constraints and a challenging socio-political environment, fostering curiosity can lead to innovative solutions for local challenges (Hatak & Zhou, 2021).

The study also confirmed the positive relationship between creative ideas and playful work design, with playful environments promoting intrinsic motivation, risk-taking, and cognitive flexibility, which enhance creativity. This is supported by Scharp et al. (2022), who emphasized the benefits of incorporating fun and competition in the workplace. In Pakistan, integrating playful work design into businesses, especially in startups, could promote creativity and collaboration, key to succeeding in a growing entrepreneurial ecosystem. Playful work design boosts entrepreneurial success by fostering motivation, resilience, and collaboration, leading to innovation and competitive advantage. For Pakistani entrepreneurs, particularly in tech and creative sectors, playful work design could enhance employee engagement and help overcome market challenges. This research offers valuable insights into how curiosity, creativity, and playful work design contribute to entrepreneurial success, particularly within the Pakistani context (Liu et al., 2023).

6.1 Theoretical Implications

This study makes significant theoretical contributions by validating the positive relationship between epistemic curiosity and entrepreneurial success, supported by the theory of human curiosity (Hatak & Zhou, 2021; John & Srivastava, 1999). It highlights the role of epistemic curiosity as a key antecedent to the generation of creative ideas, which in turn, influences entrepreneurial success (Oldham & Da Silva, 2015). The research advances our understanding by confirming that individuals with a strong desire for knowledge tend to exhibit higher entrepreneurial success through their ability to innovate and adapt. Additionally, the study provides insights into the sequential mediating roles of creative ideas and playful work design in this relationship, offering a more nuanced explanation of how curiosity translates into entrepreneurial outcomes. By incorporating openness to experience as a moderator, the research broadens the understanding of how different personality traits influence creativity and success. These findings contribute to management literature by offering empirical evidence on how curiosity-driven behaviors and workplace environments foster innovation and entrepreneurship.

6.2 Practical Implications

The study offers valuable insights for fostering entrepreneurial success by promoting epistemic curiosity in both individuals and organizations. Entrepreneurs and business graduates can enhance their curiosity through continuous learning and exploration of new knowledge. Managers, in turn, can cultivate a culture of curiosity by supporting innovative projects and creating a learning-

oriented environment. Playful work design also plays a key role, encouraging experimentation and risk-taking. Practitioners can apply this by incorporating flexible workspaces, collaborative activities, and gamification to inspire creativity and innovation.

Additionally, the study underscores the importance of creative idea generation as a pathway to entrepreneurial success (Oldham & Da Silva, [2015](#)). Managers can implement mechanisms like brainstorming sessions, innovation challenges, and idea incubation programs to stimulate creativity. Policymakers could stimulate entrepreneurial curiosity by providing innovation incentives and building startup incubators that promote experimentation and risk-taking. Educators can promote curiosity in entrepreneurship programs by incorporating inquiry-based learning and project-based modules that encourage students to investigate, ask questions, and discover innovative solutions. In entrepreneurial education, integrating curiosity-driven learning and playful activities can further enhance students' creativity and entrepreneurial skills. These practical steps provide actionable strategies for individuals, organizations, and educational institutions to nurture entrepreneurship and drive innovation.

6.3 Limitations and Future Direction

The study's limitations include its reliance on a specific sample size, which may limit the generalizability of the findings. The research's dependence on self-reported data may introduce response biases such as social desirability or recall problems (Saef et al., [2018](#)). Future studies could improve findings by using qualitative methodologies such as interviews or case studies to provide more in-depth insights into the role of epistemic curiosity in entrepreneurship. Future research should look into how cultural settings affect the relationship between epistemic curiosity and entrepreneurial success. Cross-cultural studies can determine whether this link is consistent across different society norms and values. Future studies could also investigate additional mediating mechanisms, such as cognitive, motivational, or behavioral processes, that link epistemic curiosity to entrepreneurial success. Exploring individual or contextual moderators, like personality traits, entrepreneurial experience, or organizational support, may provide deeper insights into how curiosity shapes outcomes. Finally, combining quantitative and qualitative methods could enrich the understanding of these relationships, and examining interventions to enhance curiosity and creativity could further support entrepreneurship research and practice.

6.4 Conclusion

This study makes valuable theoretical and practical contributions by exploring the relationship between epistemic curiosity and entrepreneurial success, particularly in the Pakistani context. It highlights the positive impact of curiosity on creative idea generation and entrepreneurial outcomes, emphasizing the role of creative ideas, playful work design, and openness to experience. In Pakistan, where entrepreneurship is gaining momentum but still faces challenges, fostering curiosity and creating creative work environments can stimulate innovation and drive success. By promoting curiosity-driven approaches in entrepreneurial education and organizational practices, this research offers insights for enhancing entrepreneurial mindsets and achieving sustained success, contributing to the growth of a competitive business landscape in Pakistan.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request. All relevant data generated or analyzed during this study have been included in the article.

Conflict of Interest Statement

The authors declare that there is no conflict of interest regarding the publication of this paper.

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7 References

- Adeel, A., Pengcheng, Z., Saleem, F., Ali, R., & Batool, S. (2019). Conflicts and creative idea endorsement: Do subordinates' political skills and implementation instrumentality matter? *International Journal of Conflict Management*, 30(5), 637–656. <https://doi.org/10.1108/IJCM-02-2019-0033>
- Adiningrum, T. S. (2021). The effect of curiosity on the perception of entrepreneurial opportunity. *Academy of Entrepreneurship Journal*, 27, 1–11.
- Alroaia, Y. V., & Baharun, R. B. (2018). Identification and prioritizing influential factors on entrepreneurial success: A case study of SMEs in Iran and Malaysia. *Polish Journal of Management Studies*, 17, 31–40.
- Arikan, A. M., Arikan, I., & Koparan, I. (2020). Creation opportunities: Entrepreneurial curiosity, generative cognition, and Knightian uncertainty. *Academy of Management Review*, 45(4), 808–824. <https://doi.org/10.5465/amr.2018.0252>
- Bakker, A. B., Hetland, J., Olsen, O. K., Espevik, R., & De Vries, J. D. (2020). Job crafting and playful work design: Links with performance during busy and quiet days. *Journal of Vocational Behavior*, 122, Article e103478. <https://doi.org/10.1016/j.jvb.2020.103478>
- Berlyne, D. E. (1954). A theory of human curiosity. *British Journal of Psychology*, 45, 180–191.
- Boada-Grau, J., Vallejo-Vélez, M., Serrano-Fernández, M. J., Sánchez-García, J. C., Boada-Cuerva, M., Assens-Serra, J., & Vigil-Colet, A. (2021). Curiosity as a moderating variable between Impulsivity and Entrepreneurial Orientation. *Anales de Psicología/Annals of Psychology*, 37(2), 334–340. <https://doi.org/10.6018/analesps.421621>
- Chaves-Maza, M., & Fedriani, E. M. (2022). Defining entrepreneurial success to improve guidance services: A study with a comprehensive database from Andalusia. *Journal of Innovation and Entrepreneurship*, 11(1), Article e22. <https://doi.org/10.1186/s13731-022-00213-8>
- Crowther, P., Orefice, C., & Beard, C. (2018). At work and play: Business events as entrepreneurial spaces. *The International Journal of Entrepreneurship and Innovation*, 19(2), 90–99. <https://doi.org/10.1177/1465750318767109>
- Dean, D. L., Hender, J., Rodgers, T., & Santanen, E. (2006). Identifying good ideas: Constructs and scales for idea evaluation. *Journal of Association for Information Systems*, 7(10), 646–699.
- Douglas, E. J., Shepherd, D. A., & Venugopal, V. (2021). A multi-motivational general model of entrepreneurial intention. *Journal of Business Venturing*, 36(4), Article e106107. <https://doi.org/10.1016/j.jbusvent.2021.106107>
- Friis-Olivarius, M., & Christensen, B. T. (2019). Not quite equal odds: Openness to experience moderates the relation between quantity and quality of ideas in divergent production. *Frontiers in Psychology*, 10, Article e355. <https://doi.org/10.3389/fpsyg.2019.00355>
- George, J. M., & Zhou, J. (2001). When openness to experience and conscientiousness are related to creative behavior: An interactional approach. *Journal of Applied Psychology*, 86(3), 513–524. <https://doi.org/10.1037/0021-9010.86.3.513>
- Gino, F. (2018). The business case for curiosity. *Harvard Business Review*, 96(5), 48–57.
- Gonçalves, M., & Cash, P. (2021). The life cycle of creative ideas: Towards a dual-process theory of ideation. *Design Studies*, 72, Article e100988. <https://doi.org/10.1016/j.destud.2020.100988>
- Gross, M. E., Zedelius, C. M., & Schooler, J. W. (2020). Cultivating an understanding of curiosity as a seed for creativity. *Current Opinion in Behavioral Sciences*, 35, 77–82. <https://doi.org/10.1016/j.cobeha.2020.07.015>
- Hagtvedt, L. P., Dossinger, K., Harrison, S. H., & Huang, L. (2019). Curiosity made the cat more creative: Specific curiosity as a driver of creativity. *Organizational Behavior and Human Decision Processes*, 150, 1–13. <https://doi.org/10.1016/j.obhdp.2018.10.007>

- Hardy, J. H., Ness, A. M., & Mecca, J. (2017). Outside the box: Epistemic curiosity as a predictor of creative problem solving and creative performance. *Personality and Individual Differences*, 104, 230–237. <https://doi.org/10.1016/j.paid.2016.08.004>
- Hassan, M. M., Bashir, S., Raja, U., Mussel, P., & Khattak, S. A. (2021). Personality and balanced psychological contracts: The mediating roles of epistemic curiosity and rule-following behavior. *Business Ethics, the Environment & Responsibility*, 30(1), 102–115. <https://doi.org/10.1111/beer.12311>
- Hatak, I., & Zhou, H. (2021). Health as human capital in entrepreneurship: individual, extension, and substitution effects on entrepreneurial success. *Entrepreneurship Theory and Practice*, 45(1), 18–42. <https://doi.org/10.1177/1042258719867559>
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.
- Heinemann, H., Mussel, P., & Schäpers, P. (2022). Curious enough to start up? How epistemic curiosity and entrepreneurial alertness influence entrepreneurship orientation and intention. *Frontiers in Psychology*, 13, Article e1003866. <https://doi.org/10.3389/fpsyg.2022.1003866>
- Hu, W., Xu, Y., Zhao, F., & Chen, Y. (2022). Entrepreneurial Passion and Entrepreneurial Success—the Role of Psychological Capital and Entrepreneurial Policy Support. *Frontiers in Psychology*, 13, Article e792066. <https://doi.org/10.3389/fpsyg.2022.792066>
- Hueso, J. A., Jaén, I., & Liñán, F. (2021). From personal values to entrepreneurial intention: A systematic literature review. *International Journal of Entrepreneurial Behavior & Research*, 27(1), 205–230. <https://doi.org/10.1108/IJEBr-06-2020-0383>
- Ishaq, E., Bashir, S., Khan, A. K., Hassan, M. M., & Zakariya, R. (2021). Epistemic curiosity and perceived workload: A moderated mediation model of achievement striving and overwork climate. *The International Journal of Human Resource Management*, 32(18), 3888–3911. <https://doi.org/10.1080/09585192.2019.1641734>
- Jeraj, M., & Marič, M. (2013, March 20–22). *Entrepreneurial curiosity—the new construct* [Paper presentation]. Proceedings of the 32nd International Conference on Organizational Science Development, Portorož, Slovenia.
- John, O. P., & Srivastava, S. (1999). The big five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., pp. 102–138). Guilford Press.
- Khan, M. A. (2023). From work meaningfulness to playful work design: The role of epistemic curiosity and perceived Leader's autonomous support. *IIM Ranchi Journal Of Management Studies*, 2(1), 97–113. <https://doi.org/10.1108/IRJMS-03-2022-0036>
- Lievens, F., Harrison, S. H., Mussel, P., & Litman, J. A. (2022). Killing the cat? A review of curiosity at work. *Academy of Management Annals*, 16(1), 179–216. <https://doi.org/10.5465/annals.2020.0203>
- Litchfield, R. C., Gilson, L. L., & Gilson, P. W. (2015). Defining creative ideas: Toward a more nuanced approach. *Group & Organization Management*, 40(2), 238–265. <https://doi.org/10.1177/1059601115574945>
- Litman, J. A., & Spielberger, C. D. (2003). Measuring epistemic curiosity and its diverse and specific components. *Journal of Personality Assessment*, 80(1), 75–86. https://doi.org/10.1207/S15327752JPA8001_16
- Litman, J., Hutchins, T., & Russon, R. (2005). Epistemic curiosity, feeling-of-knowing, and exploratory behavior. *Cognition & Emotion*, 19(4), 559–582. <https://doi.org/10.1080/02699930441000427>
- Liu, W., Bakker, A. B., Tse, B. T., & Van der Linden, D. (2023). Does playful work design lead to more creativity? A diary study on the role of flow. *European Journal of Work and Organizational Psychology*, 32(1), 107–117.

- <https://doi.org/10.1080/1359432X.2022.2104716>
- Lu, S., Bartol, K. M., Venkataramani, V., Zheng, X., & Liu, X. (2019). Pitching novel ideas to the boss: The interactive effects of employees' idea enactment and influence tactics on creativity assessment and implementation. *Academy of Management Journal*, 62(2), 579–606. <https://doi.org/10.5465/amj.2016.0942>
- Mueller, J. S., Melwani, S., & Goncalo, J. A. (2012). The bias against creativity: Why people desire but reject creative ideas. *Psychological Science*, 23(1), 13–17. <https://doi.org/10.1177/0956797611421018>
- Mumford, M. D., & McIntosh, T. (2017). Creative thinking processes: The past and the future. *The Journal of Creative Behavior*, 51(4), 317–322. <https://doi.org/10.1002/jocb.197>
- Murnieks, C. Y., Cardon, M. S., & Haynie, J. M. (2020). Fueling the fire: Examining identity centrality, affective interpersonal commitment and gender as drivers of entrepreneurial passion. *Journal of Business Venturing*, 35(1), Article e105909. <https://doi.org/10.1016/j.jbusvent.2018.10.007>
- Mussel, P., Spengler, M., Litman, J. A., & Schuler, H. (2011). Development and validation of the German work-related curiosity scale. *European Journal of Psychological Assessment*, 28(2), 109–117. <https://doi.org/10.1027/1015-5759/a000098>
- Oldham, G. R., & Da Silva, N. (2015). The impact of digital technology on the generation and implementation of creative ideas in the workplace. *Computers in Human Behavior*, 42, 5–11. <https://doi.org/10.1016/j.chb.2013.10.041>
- Peljko, Ž., & Antončič, J. A. (2022). Entrepreneurial curiosity, innovativeness of the entrepreneur, and company growth. *Behavioral Sciences*, 12(11), Article e424. <https://doi.org/10.3390/bs12110424>
- Petelczyc, C. A., Capezio, A., Wang, L., Restubog, S. L. D., & Aquino, K. (2018). Play at work: An integrative review and agenda for future research. *Journal of Management*, 44(1), 161–190. <https://doi.org/10.1177/0149206317731519>
- Petrescu, L. (2018). Playful work design: a diary study on its correlates in white collar workers. *Studia Doctoralia*, 9(1), 38–53.
- Rahman, S. A., Amran, A., Ahmad, N. H., & Taghizadeh, S. K. (2015). Supporting entrepreneurial business success at the base of the pyramid through entrepreneurial competencies. *Management Decision*, 53(6), 1203–1223. <https://doi.org/10.1108/MD-08-2014-0531>
- Raine, A. L., & Pandya, M. (2019). Three keys to entrepreneurial success: curiosity, creativity, and commitment. *Entrepreneurship Education*, 2, 189–198. <https://doi.org/10.1007/s41959-019-00019-y>
- Rudolph, C. W., Lavigne, K. N., Katz, I. M., & Zacher, H. (2017). Linking dimensions of career adaptability to adaptation results: A meta-analysis. *Journal of Vocational Behavior*, 102, 151–173. <https://doi.org/10.1016/j.jvb.2017.06.003>
- Saef, R., Woo, S. E., Carpenter, J., & Tay, L. (2018). Fostering socio-informational behaviors online: The interactive effect of openness to experience and extraversion. *Personality and Individual Differences*, 122, 93–98. <https://doi.org/10.1016/j.paid.2017.10.009>
- Sarac, S., Mede, E., & Akgun, E. (2022). Does e-learning trigger epistemic curiosity? *Journal of Qualitative Research in Education*, 30, 211–222. <https://doi.org/10.14689/enad.30.9>
- Scharp, Y. S., Bakker, A. B., & Breevaart, K. (2022). Playful work design and employee work engagement: A self-determination perspective. *Journal of Vocational Behavior*, 134, Article e103693. <https://doi.org/10.1016/j.jvb.2022.103693>
- Scharp, Y. S., Breevaart, K., Bakker, A. B., & Van der Linden, D. (2019). Daily playful work design: A trait activation perspective. *Journal of Research in Personality*, 82, Article e103850. <https://doi.org/10.1016/j.jrp.2019.103850>
- Schutte, N. S., & Malouff, J. M. (2020). Connections between curiosity, flow, and creativity. *Personality and Individual Differences*, 152, Article e109555. <https://doi.org/10.1016/j.paid.2019.109555>

- Staniewski, M. W., & Awruk, K. (2021). Parental attitudes and entrepreneurial success. *Journal of Business Research*, 123, 538–546. <https://doi.org/10.1016/j.jbusres.2020.10.039>
- Syed, I., Butler, J. C., Smith, R. M., & Cao, X. (2020). From entrepreneurial passion to entrepreneurial intentions: The role of entrepreneurial passion, innovativeness, and curiosity in driving entrepreneurial intentions. *Personality and Individual Differences*, 157, Article e109758. <https://doi.org/10.1016/j.paid.2019.109758>
- Tang, T., Vezzani, V., & Eriksson, V. (2020). Developing critical thinking, collective creativity skills, and problem-solving through playful design jams. *Thinking Skills and Creativity*, 37, Article e100696. <https://doi.org/10.1016/j.tsc.2020.100696>
- Thrash, T. M., Maruskin, L. A., Cassidy, S. E., Fryer, J. W., & Ryan, R. M. (2010). Mediating between the muse and the masses: Inspiration and the actualization of creative ideas. *Journal of Personality and Social Psychology*, 98(3), 469–487. <https://doi.org/10.1037/a0017907>
- Wan, Z. H., Lee, J. C. K., & Hu, W. (2021). How should undergraduate students perceive knowledge as a product of human creation? Insights from a study on epistemic beliefs, intellectual risk-taking, and creativity. *Thinking Skills and Creativity*, 39, Article e100786. <https://doi.org/10.1016/j.tsc.2021.100786>
- Yan, J. (2020). *Exploring the unknown requires leveraging uncertainty: Two essays on a real options perspective on the pattern and decision-making of entrepreneurial internationalization* [Doctoral dissertation, University of Tennessee]. Tennessee Research and Creative Exchange. https://trace.tennessee.edu/utk_graddiss/5806/