International Journal of Learning, Teaching and Educational Research
Vol. 25, No. 1, pp. 967-971, January 2026
https://doi.org/10.26803/ijlter.25.1.44
Received Oct 1, 2025; Revised Dec 15, 2025; Accepted Jan 19, 2026

Leadership, Faculty Behaviour, and Educational Supply Chain Management: A Systemic Model for Fostering Entrepreneurial Intentions in Higher Education

Mohit Yadav*
JGBS, O.P. Jindal Global University, India
International School, Vietnam National University, Hanoi, Vietnam

Anugamini P Srivastava
Research Fellow, INTI International University, Malaysia

Muna I. Alyousef
Department of Management Information System, College of Business Administration, University of Hail, Ha'il 81451, Saudi Arabia

Mohammad Faraz Naim
Assistant Professor, Department of Management
Birla Institute of Technology and Science (BITS), Pilani – Pilani Campus
Pilani, Rajasthan – 333031, India

Azadeh Amoozegar
Faculty of Education and Liberal Arts, INTI International University, Malaysia

Abstract. This paper examines the impact of genuine transformational leadership on entrepreneurial intentions of students in the context of educational supply chain management, based on the Theory of Planned Behavior. The study formulates propositions by reviewing literature on leadership, teacher traits and entrepreneurship education to provide the relationship between leadership and the entrepreneurial innovation intentions, academic optimism and organizational citizenship behavior of the students. It emphasizes the contribution of academic optimism in the explanation of the influence of leadership on teachers and students. The paper provides a unified conceptual framework that may be used in future empirical studies and demonstrates how universities can nurture entrepreneurial attitudes and innovative practices with the help of

*Corresponding author: Mohit Yadav; *mohitaug@gmail.com*

successful leadership. The results offer useful suggestions to academic faculty who want to foster the entrepreneurial potential of students and suggest the way to conduct research. This work bridges leadership, education management and entrepreneurship, which provides a new approach to innovation promotion among students and enhances the effectiveness of higher education institutions.

Keywords: citizenship behaviour; efficacy; educational environment; entrepreneurship intentions; higher education; leaders; optimism; sustainability

1. Introduction

Within the past ten years, the research on entrepreneurship education has attracted the attention of many scholars who perceive its topicality on the international scale (Thomassen et al., 2019). The emphasis on encouraging creativity and innovation in the decision-making process among young minds has acquired a priority in the global economy (Bell and Bell, 2020). Despite the increased focus, there are still a lot of gaps in understanding the factors that influence the education of entrepreneurship and how it can become a force to change society (Ndofirepi, 2020; Ratten & Usmanij, 2021).

The study addresses these gaps by investigating the problems, which affect innovative entrepreneurial intentions within the framework of Indian higher education. The most significant aspect affecting the behavior and intentions of students is transformational leadership (TL) (Srivastava & Dhar, 2019). However, criticism of TL has resulted in the need to adopt a true attitude toward leadership within the education sector (Srivastava & Dhar, 2019; Srivastava et al., 2019). This research seeks to explore the authenticity of TL in developing entrepreneurial intentions in students and fill gaps in literature.

Teachers are influential players in the educational process as they have a significant influence (Srivastava & Dhar, 2019). Their style, passion, and effectiveness influence the confidence of students and their desire to become entrepreneurs (Srivastava & Shree, 2019). The study is aimed at comprehending the role of teachers in bridging leadership activities to promote active learning among students and entrepreneurial growth. In addition, the research recognizes the significance of a conducive learning environment that is offered by institutions of higher learning. Colleges that have a well-trained faculty and leadership can help students increase their knowledge, self-efficacy and risk-taking skills which will be a strong base for entrepreneurship. The study focuses on the differences in learning conditions in institutions of higher learning and how it influences entrepreneurial intentions.

The discussion prompts a fundamental question – does higher education operate with a supply chain? Previous studies have primarily explored the supply chain in manufacturing or profit-oriented industries, but the applicability of the concept to the non-profit education sector is highlighted by O'Brien and Deans (1996). Jauhar, Pant and Nagar (2017) provide evidence for the existence of an

educational supply chain, linking resources, teaching pedagogies and experiential learning to the growth-oriented intentions of students. The study aims to fill the gap in the literature by investigating the linkage between the theory of planned behavior and educational supply chain management. The following questions are posed:
RQ1: What could the potential impact of authentic transformational leadership be on entrepreneurial intentions among students in the Indian higher education context?
RQ 2: How might teachers contribute to connecting leadership efforts for active student learning and the possible development of entrepreneurial intentions?
RQ 3: To what extent could the learning environment in higher education institutions influence students' entrepreneurial intentions, from an exploratory perspective?
RQ 4: Is there potential evidence of an educational supply chain, and how could it link with the theory of planned behavior in fostering students' growth-oriented intentions?

Through an extensive literature review, this paper aims to develop an integrated model that addresses these research questions, thereby contributing to a more comprehensive understanding of the role of leaders and teachers in shaping entrepreneurial intentions among students.

1.1 Research Objective
The primary objective of this study is to theoretically establish and contextualize the Educational Supply Chain Management (EduSCM) framework within Indian higher education institutions, with a specific emphasis on entrepreneurship education. The study integrates three central constructs—

- Authentic Transformational Leadership (ATL),
- Teacher behaviors, including organizational-citizenship behavior (OCB) and academic optimism, and
- The Theory of Planned Behavior (TPB)

to explain how students develop entrepreneurial innovative intentions (EII) within a structured educational supply chain.

Furthermore, the study aims to highlight the critical role of the learning environment—including institutional culture, resource accessibility, peer dynamics, experiential exposure and industry linkages—in shaping students' entrepreneurial attitudes, subjective norms and perceived behavioral control. Through this integrative lens, the study proposes a comprehensive conceptual model that positions Indian HEIs as value-generating educational supply chains, wherein leadership (as the supplier), faculty (as transformation agents), and students (as co-created outcomes) interact systematically to produce not merely employable graduates, but entrepreneurially oriented innovators capable of driving socio-economic advancement.

2. Methodology

The study uses the conceptual research design approach. The aim is to focus on theory development which includes extensive reviews of the literature with an emphasis to earn theoretical depth and academic rigor. The study integrates EduSCM, with leadership behavior, teacher characteristics, and entrepreneurial intentions in the context of Indian higher education institutions (HEIs).

The literature was systematically searched across leading academic databases using a combination of Boolean operators and keyword strings (See Table 1).

Table 1: Keywords and databases

Keywords	Databases
"educational supply chain" + "	Scopus, Web of Science, & Google scholar
"Transformational leadership+higher education"	
entrepreneurship education+leadership	
authentic leadership" + *"higher education*	
teacher efficacy+leadership	
teacher efficacy+entrepreneurship	
academic optimism" + *"OCB"*	
"entrepreneurial intentions", and "theory of planned behavior"	
"student innovation" + *"HEIs*". Etc.	

The initial search (total 22,860 articles) was limited to peer-reviewed journal articles in English published between 2000 and 2025, ensuring relevance to contemporary educational and leadership contexts.

Screening and Selection

- Articles were screened in multiple stages:
  - Title and Abstract Screening – Articles unrelated to higher education, leadership or entrepreneurship education were excluded.
  - Duplication Removal – Duplicate entries across databases were eliminated.
  - Thematic Coding – Articles were coded according to key themes: EduSCM, leadership, teacher behavior and student entrepreneurial intentions.
  - Full-Text Review – Only studies providing conceptual frameworks, theoretical models or validated constructs were retained.

After rigorous screening, 313 articles were selected for detailed review.

Data Extraction

A standardized data extraction protocol was employed to ensure consistency and authenticity. For each article, the following information was systematically recorded:

- Authors, year and country of study
- Research context and sample characteristics (if applicable)
- Theoretical framework and key constructs
- Conceptual or empirical relationships identified
- Contribution to EduSCM, leadership, teacher behavior or entrepreneurial intentions

- This approach ensures that all relevant conceptual insights are captured for model development.

3. Data Analysis

The analysis employed qualitative content analysis and thematic synthesis, organized around the research objectives:

- EduSCM in HEIs – Identification of conceptual frameworks and supply chain thinking in education.
- Leadership and Teacher Behavior – Analysis of transformational and authentic leadership effects on teacher efficacy, academic optimism and OCB.
- Entrepreneurial Intentions – Examination of behavioral pathways linking leadership, teacher characteristics and educational processes to students' entrepreneurial intentions, guided by the TPB.

Thematic patterns, conceptual overlaps and causal linkages were synthesized to develop a comprehensive conceptual model, highlighting leaders and teachers as central actors in the educational supply chain influencing students' entrepreneurial intentions.

3.1 Timeframe

The literature search and review were conducted for articles published between January 2000 and December 2025, ensuring coverage of both foundational and contemporary research in EduSCM, leadership and entrepreneurship education.
This enhanced methodology ensures authenticity, rigor, and clarity, providing a strong theoretical foundation for future empirical validation in the context of Indian HEIs.

3.2 Theoretical Framework

3.2.1 Educational Supply Chain

Supply Chain Management (SCM) is the concept of controlling the movement of goods, services, and information between interrelated organizations within a distribution network (Jauhar et al., 2017; Nakano & Matsuyama, 2021). Historically focused on the changing of raw materials into the finished products, the SCM is committed to provide value to end-consumers in terms of quality, timely delivery and cost efficiency. The essence of it is to deliver the right product to the right place at the right time at the best price, hence gaining a competitive edge. A good SCM improves the work, simplifies outsourcing, raises profitability, satisfies the customer, and allows organizations to operate in a more globalized and competitive environment (Erboz et al., 2021; Fernandez et al., 2021).

In the manufacturing scenario, SCM is usually linear: chain members take inputs provided by their upstream suppliers, process them and send out outputs to their downstream counterparts. Although different from the manufacturing sector, the education sector can also apply this model. Basing their argument on the Global Supply Chain Forum, Jauhar et al. (2017) claim that the main principles of SCM can be applied to educational institutions. On the same note,

O'Brien and Deans (1996) proposed the concept of implementing SCM models in higher education to provide a streamlined institutional operation and enhance quality output.

Following these initial conceptualizations, Habib & Zurawicki (2010) came up with the model of Integrated Tertiary Educational Supply Chain Management of higher education which considers higher learning in three interdependent streams: education, research and institutional management. This model has been empirically tested in Bangladesh and Malaysia (Lee et al., 2023) and it was shown that supply chain alignment results in better graduate performance and institutional performance. EduSCM is, however, not only about the provision of instruction but of making the students, the raw input, into a competent value-added product: employable, entrepreneurial and socially responsible graduates.

Han et al. (1993) emphasize that in education, SCM is founded on partnerships and is not entirely transactional. Student-faculty and student-institutional leadership relationships should be collaborative, experiential and value-based (both as inputs and outputs). Similar to the traditional supply chains, inefficiency and lack of effectiveness can be caused by friction which in this case is the lack of alignment between the institutional training and industry requirements (Feller et al., 2006). For example, where faculty development programs are old-fashioned or fail to reflect the changing demands of the students or the labor market, the lack of connection is detrimental to the growth of the students.

Leaders, teachers, and institutional systems are co-creators of value in EduSCM, providing not just content but also context: exposure to the real world, the opportunity to think critically and platforms for innovation. The educational supply chain is therefore made up of processes such as teaching, mentoring, curriculum delivery, feedback loops and interaction with the industry. This chain is successful because of the flow of information, alignment of stakeholders and responsiveness to external demands (Lau, 2007; Lee et al., 2023).

In education, the student is the input and transformed product unlike manufacturing industries where the end product is a tangible good. Learners give their time, effort and mental resources to the system and, as a result of institutional processes, come out with a new set of capabilities. EduSCM focuses on the fact that the development of students, their attitude and employability are the results of transforming the systemic input. HEIs are strategic focal points, which can link students to the global opportunities via international cooperation, industry partnerships and technology-enhanced learning opportunities (Habib, & Zurawicki, 2010).

Therefore, EduSCM is instrumental in harmonizing leadership will, pedagogical presentation and student growth. It has the potential to generate high entrepreneurial and innovative graduates when well managed. The paper is based on the EduSCM framework that asserts that the alignment of leadership (especially ATL) and faculty behavior (including OCB and academic optimism)

with a student-centered, value-oriented model will result in a supply chain that not only generates employable individuals but also entrepreneurial changemakers. This is a manifestation of the overall objective of EduSCM to provide quality education and research that can be useful to society and promote national development priorities (Habib & Zurawicki , 2010; Jauhar et al., 2017).

3.3 Defining Main Constructs

3.3.1 Authentic Transformational Leadership

Theoretically, TL refers to leadership that inspires followers to surpass their self-interest to accomplish common goals. By having an extraordinary effect on followers, TL builds respect and trust with subordinates. They encourage appropriate behavior and doing right and increase followers' awareness of the joint mission and vision. Moreover, they motivate innovative approaches to accomplish group goals and provide opportunities for followers' growth and development. However, studies have shown that transformational leaders identified as motivators and transformers can affect their followers negatively if they become unethical and inauthentic. Such transformational leaders motivate followers to seek power and make followers dependent (Thapa et al., 2025). They seek to control people, encourage favoritism and competition, and exploit the followers' feelings.

In other words, transformational leaders with an inauthentic focus on goals rather than the proper means to attain those objectives can negatively affect followers' behavior, mindset and overall trust in the organization. Nichols, (2008) asserted that ethics is an essential aspect of leadership. Leadership to gain more power, emotionally pressurizing followers to attain goals, contradicting their willingness and interest, and disrupting organizational learning through lack of checks and transparency are the crux of problems causing major frauds and unethical activities (Sart, 2014). Furthermore, followers are unsatisfied when leaders seem to be effective or merely transformational. Thus, adding an authentic approach to TL is essential.

Nichols (2008) states, "The concept of authenticity may contribute to the TL paradigm, producing an ideal form of leadership." (p. 3). Thus, authentic leadership theory was propounded for leaders to focus on the proper means to attain goals. The idea specifies authentic leaders as self-aware, rational thinkers and fact-based decision-makers. Such leaders have congruency between what they say and do and motivate followers by setting an example. Also referred to as a positive, root-oriented form of leadership, this approach seeks to develop followers into future leaders by inspiring effective and autonomous engagement, rather than relying on the imposition of goals or pressure, as is often associated with transformational leadership.

Although authentic leaders emphasize their values and belief in what they feel is genuine, they can impact the attainment of goals. The followers who seek proper guidance and instructions may fail to imitate their leaders to work effectively. Similarly, followers with different value systems from their leaders might be inspired but could not bring the required transformation to the workplace. Thus,

it is essential to combine the positive aspect of both types of leadership with changing environmental factors and evaluate the ATL theory for its possible benefits.

Theoretically, authentic transformational leaders are leaders who aim to bring about transformation through authentic means. Such leaders can stimulate their followers intellectually and inspirationally with individualized consideration. Further, they can authentically influence their followers by representing consistency between preaching and practice. Authentic transformational leaders combine their vision with a sense of responsibility to serve the common good. They do not manipulate followers to attain power but seek to go beyond self-benefits and help organizations achieve success. Such leaders encourage debate and listen to followers to provide creative problem-solving ideas.

In addition, they remain transparent in processes, use hard evidence on which to base their decisions, remain ethical in actions and develop their followers morally and ethically to attain common goals. Thus, it can be said that authentic transformational leaders can transform to the highest level of authenticity are able to reach the highest standard of genuine leadership. In this context, authenticity refers to leaders acting consistently with their core values, ethics and self-awareness, rather than adopting behaviors merely to influence or motivate others. When transformational leadership is grounded in authenticity, leaders do not simply inspire change through vision or charisma, but do so in a way that is transparent, ethical and trustworthy. As a result, their influence is deeper and more sustainable, enabling meaningful transformation while maintaining integrity and developing genuine trust among followers.

3.4 Entrepreneurial Innovative Intentions

Entrepreneurial intentions refer to the state of mind of a person that directs them to become entrepreneurs. Specifically, it represents behavioral intentions that motivate individuals toward becoming an entrepreneur or indicate the pathway to achieve the goal of becoming an entrepreneur. Theoretically, entrepreneurial intentions are grounded in two widely adopted models – the TPB derived by Azjen (1991) and the model of intention in the entrepreneurial event (SEE) proposed by Shapero and Sokol (1982). These models underline the perspective of perceived desirability and perceived feasibility as critical aspects of encouraging entrepreneurial intentions.

In other words, a person aims to become an entrepreneur and start their own business based on the degree of attractiveness toward creating a new business (perceived desirability) and self-efficacy in their capacity to be an entrepreneur (perceived feasibility), although, the theory acknowledges that entrepreneurial intention does not arise without a propensity to act. A person needs both intrinsic and extrinsic motivation, as well as a belief that becoming an entrepreneur is desirable and achievable.

Innovation is a critical perspective in entrepreneurship. Along with finance, time, resources and willingness to initiate a business, innovative behavior is

desirous of attaining a competitive edge in the market. Creative behavior is explained as the ability of an individual to look out for new and different ideas to solve a specific problem. In other words, it is the capability to develop and seek novel ideas and attempts to establish the base for implementing conceived ideas. It involves the generation of a view to the realization of an idea through partnership building and transference or dispersal of ideas at multidimensional levels (group or individual). Innovative behavior is an outer expression of internal creativity to advance innovative products and processes.

Since creativity is the crux of every innovation, EII denotes inner creativity that motivates an individual to innovate something new for the community or society. Depending upon the degree of attractiveness toward a particular area of business, added with feasibility and desirability, EII can explain individuals' aim to become a business owner to market their innovative ideas.

3.5 Academic Optimism

Academic optimism refers to a combined belief of teachers about themselves, their team and their students. It is defined as:

> *''a shared belief among faculty that academic achievement is important, that the faculty can help students achieve, and that students and parents can be trusted to cooperate with them in this endeavor–in brief, a school-wide confidence that students will succeed academically.'' (McGuigan & Hoy 2006, p. 204)*

Theoretically, teachers' academic optimism consists of three aspects: academic emphasis, i.e. the degree to which their institutions emphasize student achievement and academic excellence; a collective sense of efficacy, i.e., a shared belief that their group is capable of attaining the common goal of surpassing all differences; and trust, i.e., teachers' belief in their students and their parents to be benevolent, honest, open and reliable and competent to help in the smoother running of the institutional jobs. This integrated variable was developed due to a high level of intercorrelation among all three dimensions and their effect on student achievement, sidelining the negative impact of socio-economic status.

Academic optimism has frequently affected the leadership style in the organization. From authentic leadership to ethical leadership to TL, academic optimism is influenced by the leadership style. Authentic leadership positively affects academic optimism. Authentic leadership is a positive psychology theory that injects trust and optimism into the environment. Further, HEIs support teachers to work with high commitment, loyalty and emphasis on higher efficiency, efficacy and effectiveness. Similarly, TL affects academic optimism by improving teachers' orientation toward group goals.

3.6 Organizational-Citizenship Behavior

OCB refers to individuals' discretionary behavior to benefit the organization. OCB is voluntary behavior beyond the job description and limitations of role specifications. It is aimed at helping individuals or members of teams or directed toward the organization. It comprises five different factors. The first dimension is conscientiousness, representing individuals' committed behavior to deliver

high performances. The second dimension is altruism, which exhibits the unselfish approach of an individual toward others. Civic virtue is the third dimension representing individuals' positive attitude and sense of responsibility toward their community events and organizational activities. The fourth dimension, sportsmanship, reflects employees' ability to maintain a positive attitude, demonstrate resilience, and respond constructively to challenges and varying situations within the workplace. Finally, courtesy expresses an individual's politeness and civility toward others in the organization. The main aim of OCB is always to encourage individuals to take self-initiated actions to benefit the organization, even though the formal reward systems do not recognize it.

3.7 Higher Education Institution Context

The Indian higher education network is considered one of the largest higher education systems globally (Sheikh, 2017). The 'higher education' term in India denotes the tertiary level of education after 12 years of schooling (Ilie et al., 2021). These 12 years comprise ten years of primary and two years of secondary education. With a network of 1 000+ universities and more than 42 000 colleges, Indian higher education has represented exceptional outcomes. All these institutions are managed under the purview of the Ministry of Education (Kumar et al., 2021).

Using the overall advanced teaching and learning pedagogies and methodologies, Indian higher education has grown impressively. The theory plus practical, experimental and experiential learning activities provides a great opportunity for students to expand their learning skills. Such activities aligned with external competitions and internships add value to the overall expansion of their visualizing ability, problem-solving capability, risk management, vocal skills, stress management and team management (Kumar et al., 2021).

HEIs also place emphasis on developing entrepreneurship education for students, thus supporting the National Education Policy 2020 (Kumar, 2021). These specialized programs enable students to think out-of-the-box and formulate entrepreneurial intentions by giving them corporate mentors and seed funding to actualize their ideas into real businesses. They affect students' cognitive and non-cognitive competence to stimulate intentions toward entrepreneurship.

The teaching staff and leaders emphasize giving entrepreneurship education to motivate innovation among young minds. This education can create a significant number of entrepreneurs, thus influencing overall job creation in the market and improving the competitive edge in the global market. Therefore, it can be said that these "learning-by-creating-value" approaches based in the field of entrepreneurship enable the development of substantial human capital for the nation (Jain et al., 2023; Meenakshi & Sharma, 2022).

However, this whole process cannot work in the absence of teachers' and leaders' contributions (Srivastava et al., 2022). Similarly, it is evident that when

leaders in higher education aim to bring transformations and communicate value with shared objectives, it influences the employees to work efficiently and effectively toward achieving those objectives. Furthermore, when they involve all stakeholders with transparency in decision-making, they tend to develop a positive environment for growth (Srivastava et al., 2019; Srivastava et al., 2022).

Regular training for faculty members, group/ team building activities, reduction in office politics, and encouraging all faculty to work under one umbrella of the institutional brand can positively affect teachers going beyond their job descriptions and supporting the institutional brand (Srivastava et al., 2019). In higher education, all faculty are experts in their areas. Bringing all to one level and connecting their identity from individual to institutional identity is a task to be considered before the success of such programs can be ensured. Moreover, when teachers attain a perception of training comprehensiveness and gain a sense of belongingness to the institution, they tend to have collective efficacy and trust their students (Srivastava & Dhar, 2015). Hence a positive environment of encouragement and exploration can better develop students' entrepreneurial skills (Leffler, 2020).

3.8 Authentic Transformational Leadership in Higher Education Institutions

ATL plays a pivotal role in the evolution and sustainable growth of HEIs. According to Wang et al., (2022), the implementation of TL in the public universities is lagging, even though the leadership style has been demonstrated to be effective in enhancing management and governance in other sectors. This observation implies that there is a discrepancy between the potential and practice in the field of academic leadership. In a contrasting view, Elrehail et al. (2018) provide evidence that TL exerts a significant positive influence on innovation in higher education settings in Jordan, though authentic leadership alone does not seem to yield the same level of support for innovative practices.

Howell et al. (2022) examined the attributes of TL in doctoral programs in HEIs and discusses how the latter are equipping the future generation of academic leaders. These diverse studies underscore the critical yet complex role that ATL plays in academia (Elrehail et al., 2018; Howell et al., 2022; Wang, et al., 2022). Further expanding on this theme, Antonopoulou et al. (2022) discover that both transformational and authentic leadership styles exert a beneficial impact on higher education, with transformational leaders providing inspiration and authentic leaders fostering genuineness and stronger interpersonal connections. Fardillah et al. (2018) explore the role played by TL in organizational commitment indirectly through job satisfaction as a mediator in the institutions of higher learning. The discovery provides a new perspective on the meaning of how the styles of leadership may affect the institutional processes and employee turnover.

Authentic leaders and transformational leaders are shown to have a significant effect on HEIs (Srivastava et al., 2022). Whether it be toward improving teachers' role and extra-role behavior or improving students' achievement status, the leadership approach is relevant. However, criticism of TL for its overemphasis

on getting things right than doing the right thing has questioned its relevance, specifically in the education sector. Since such leaders may involve themselves in unethical practices to convert transformative ideas into practice, scholars doubt this leadership approach (Srivastava & Dhar, 2019). Thus, ATL is believed to prevent corrupt practices and rescue the education sector from fraud and unethical practices. The main aim of such leaders is to bring transformative changes to the focused sector in authentic ways. In other words, leaders are authentic, rational and data-driven, listen to their followers and make decisions based on their self-belief and through transparent policies and channels to bring transformations.

In the education sector, ATL has many perspectives. Since this sector is going through significant changes due to the pandemic, transformational ideas are required. Such statements would enable institutions to differentiate themselves from their rivals and maintain the interest and participation of teachers and students in the classrooms. Thus, ATL can ensure that the ideas are checked for applicability and applied authentically. Another possibility is that ATL can motivate teachers to work more effectively. They can put examples before the teachers for using different online tools and technological advancements and motivate them to use them with higher acceptance.

By leading by example, ATL can work on reducing the resistance among teachers, encourage them to learn and update with transformations and bring up effective retention, training and development practices. Thus, it is essential to emphasize not only transformational leaders but authentic transformational leaders for the sustainability of HEIs.

3.9 Role of HEIs Toward Entrepreneurial Innovation Intentions

HEIs are the basic platforms where human capital can be developed to become innovative, economically resilient and sustainable, creating environments where theory and experiential education are combined, HEIs enable students to acquire not only technical and managerial skills but also the critical entrepreneurial mindset that is required in managing the uncertainty and identifying market opportunities (Srivastava et al., 2022).

In accordance with international educational reforms and economic interests, the current goal of HEIs is to develop EII in the students, this construct that reflects the aspiration and the willingness to establish innovative projects. These are not accidental but need to be developed in a systematic manner by designing education, supporting it in institutions, and the entrepreneurial ecosystem around it (Anjum et al., 2020; Barba-Sánchez et al., 2022; Bell, 2019). Some of the studies grounded in the TPB confirm that entrepreneurial attitudes, perceived behavioral control and subjective norms are highly predictive of such intentions (Paray & Kumar, 2020; Rahman et al., 2024). Furthermore, faculty mentorship, creativity-based pedagogy and incubation networks are university support systems that mediate the relationship between student creativity and intention formation to a significant degree (Anjum et al., 2020).

To make EII institutional, it is necessary that the HEIs go beyond the traditional classroom teaching and adopt a value-based, systemic approach similar to EduSCM. In this model, students are not simply passive consumers but active co-creators in a chain where institutional leadership, curriculum designers, teaching faculty, and industry partners are the nodes that add value (Feller et al., 2006; Jauhar et al., 2018). EduSCM facilitates more effective alignment of what students' study with what entrepreneurial ecosystems require with little friction and waste in educational output (Lau, 2007).

3.9 Factors Affecting Innovative Entrepreneurial Intentions

Habib and Jungthirapanich (2009) highlight that ESC is a vital signifier to attaining desirable students' skills and attributes. Successful execution of each phase of ESC, from suppliers' end to outcomes, can ensure that students develop skills from which the whole programs, pedagogies and policies were derived. In this line, Choi et al. (2003) state that the environment plays an essential role in improving individuals' self-efficacy in their decision-making, risk-taking and career adaptability. Further, Haddad et al. (2021) state that entrepreneurial intentions as an outcome of institutional environment leadership and peer learning. Thus, it is essential to explore the significant factors affecting entrepreneurial, innovative intentions.

3.10 Authentic Transformational Leadership and Entrepreneurial Innovative Intentions

Studies have denoted entrepreneurial intentions as an outcome of mentoring and leadership. The leadership approach can enhance the thought process of followers, thus encouraging them to attain common objectives. This relationship was very much documented and explored empirically. A few studies added value to this relationship and examined the effect of leadership in universities. Some indicated leaders' (deans, heads of department, and headmasters) role toward students' creative problem-solving, innovative performances and innovative behavior. Some examined its impact on students' entrepreneurial mindset and entrepreneurial success. This led to many entrepreneurial initiatives and startups by young alumni from universities and institutions.

The study by Razavi and Aziz (2017) highlights the importance of TL in mediating the relationship between important entrepreneurial characteristics such as innovativeness, proactiveness and risk-taking and intrapreneurial intentions. This paper brings out the role played by leadership styles in entrepreneurial behavior. In addition to this, Shaikh et al. (2020) conducted a study to create a questionnaire to measure entrepreneurial and intrapreneurial intentions in student pharmacists. The paper has identified achievement motivation, leadership self-efficacy and problem-solving skills as the key predictors of such intentions, and this again confirms the connection between leadership traits and entrepreneurial intentions.

Equally, Gozukara et al., (2016) found that innovativeness has a positive influence on entrepreneurial intentions among Turkish university students, and this implies that innovative thinking is among the key sources of entrepreneurial intentions among this group. Zakaria et al., (2021) extended this information and

demonstrated that there is a positive correlation between the attitudes and self-efficacy and entrepreneurial intentions among undergraduate students. This paper reveals the importance of these psychological traits in entrepreneurial thought. In addition, Wathanakom et al., (2020) explored the cause-and-effect approach of innovativeness and entrepreneurial intention in undergraduate students. The results indicated that innovativeness is a strong predictor of entrepreneurial intention, which indicates that entrepreneurial tendencies can be promoted through the development of innovative thinking in schools.

TL and authentic leadership approaches were also analyzed to predict entrepreneurial intention. In higher education, authentic leadership helps students develop into future leaders by encouraging them to take risks, make good decisions, and work well in teams. Authentic leaders lead by example and motivate students to improve themselves, which helps them think creatively and contribute positively to society. Studies also show that transformational leadership supports the development of entrepreneurs. By sharing a clear vision for a better future, transformational leaders encourage students to be creative and develop strong problem-solving skills.

However, considering the negative side of TL, scholars have suggested combining authenticity with the transformational leadership approach. Thus, authentic transformational leaders can have a combined positive effect by stimulating students intellectually, motivating them by inspiring, considering their importance and ideally influencing them to behave ethically while serving society. Authenticity in leadership can enable moral-based development and an ethical mindset, thus removing the potential for leaders to abuse their transformational intentions (Bass & Steidlemeier, 1999). Thus, based on the above discussion, it can be presumed that ATL has an impact on the development of EII among students.
Proposition 1: Authentic transformational leadership affects student's entrepreneurial innovation intentions

3.11 Authentic Transformational Leadership and Academic Optimism
Authentic leadership has been acknowledged to positively affect teachers' emotions, behavior and perceptions. Srivastava and Dhar (2020) mention authentic leadership as a predictor of teachers' collective efficacy toward their teammates, academic emphasis and trust in their students, thus, academic optimism. The studies conducted highlight that authentic leadership provides a trust-based work culture. The trust develops a positive workspace, thus encouraging teachers to exhibit the same culture toward students. When authentic leaders remain transparent in their approach and manage by example, teachers feel a sense of belongingness. They identify themselves based on their university identity and aim to exhibit the same in their teaching and other activities. Further, when authentic leaders use effective channels to communicate the values, objectives and expectations for performance, it encourages teachers to work for the betterment of universities.

In the same vein, TL was investigated as an indicator of academic optimism. Prasetia et al. (2020) performed an exhaustive investigation of how TL and a

culture of academic optimism influence the main educational outcomes, including teacher empowerment, motivation and the overall school effectiveness. Their findings showed the significant and positive contribution of both TL and a culture of academic optimism toward enhancing the performance of learning institutions. This study is consistent with the finding of Srivastava and Dhar (2016), according to which authentic leadership promotes academic optimism which occurs mainly via affective commitment. In the same way, Kulophas et al., (2018) was able to add to this body of knowledge by confirming a model that illustrates how authentic leadership can influence teachers' academic optimism.

In the same vein, Ninkovic et al., (2023) provided evidence that transformational leadership positively affects all dimensions of teachers' academic optimism and is directly related to teacher engagement. In addition to these results, Khalil et al., (2022) found that there is a moderate strong relationship between the TL of head teachers and academic optimism in secondary schools. Together, these studies indicate the critical role of leadership styles, especially transformational and authentic leadership, in developing academic optimism and improving the performance of academic environments.

Based on this view, Prasetia et al. (2020) suggested that four dimensions of transformational leadership play an important role in promoting academic optimism. These dimensions include setting goals, developing staff, redesigning the organisation, and managing the instructional programme. Together, they help teachers organise their work and focus on effective performance. Transformational leaders promote a shared vision and encourage collective staff development by involving teachers in goal-setting and teamwork. This strengthens teachers' sense of collective efficacy. In addition, by reviewing progress towards goals, encouraging innovation and supporting professional practice, transformational leaders help teachers perform their roles more effectively.

Finally, by providing opportunities and resources to communicate the school's vision to staff, students and parents, transformational leaders help build teachers' trust in those they serve. Considering the positive effect of TL, it is clear that it can influence teachers' academic optimism in a university setting. However, as discussed above, the loopholes this leadership approach can irreparably damage employees' performance. Thus, we can presume that ATL can significantly impact academic optimism.
Proposition 2: Academic optimism is predicted by authentic transformational leadership.

3.12 Academic Optimism and OCB

Academic optimism encourages teachers to trust their students and believe their team collectively emphasizes academic excellence. This robust optimistic approach can enable teachers to help others voluntarily. Supporting this argument, Srivastava and Dhar (2019) highlight that academic optimism supports individuals to exhibit OCB. They proposed and examined the effect of first-order factors of academic optimism on OCB and provided that when teachers sense encouragement for improvement, they feel optimistic. Such an

optimistic sense of belongingness and identity motivates teachers to help students and colleagues to benefit the organization. Wagner (2012) and Krug (2015) support the positive and significant association between the OCB of teachers with AO. Rauf, & Ahmed, (2017). also found a strong correlation between teachers' optimism and students' academic achievement while Makvandi et al. (2018) indicate that academic optimism could be a predictor of OCB. In other words, when optimism increases, it increases the individual's psychological capital. Positive psychological capital thus motivates the demonstration of OCB.

Recent research has contributed greatly to our knowledge on the influence of authentic leadership on OCB and has identified different mediating factors. Farid et al. (2020) have shown that OCB is improved by authentic leadership by affective- and cognitive-based trust. Likewise, Shapira-Lishchany &Tsemach, S. (2014). (2014) found the dimension of psychological empowerment, namely impact, as a mediator between authentic leadership and OCB among teachers. Srivastava (2016) went further to demonstrate that affective commitment partly mediates the connection between authentic leadership and academic optimism, and training comprehensiveness enhances this connection. A recent addition to this field of research was made by Ribeiro (2022), who found that authentic leadership has a positive impact on OCB mediated by affective commitment.

To broaden the area of interest, Rastegar & Safari, (2017), examined academic optimism as an intervening variable in the connection between authentic leadership and OCB in teachers. This was supplemented by Tore and Cetin (2022) who analyzed the role of organizational culture in mediating the effects of authentic leadership by school managers on the OCB of teachers, which provides the context of academic optimism. Jun et al. (2023) explored the mediating role of identification with the supervisor and social identification between authentic leadership and follower outcomes, hope and OCB. All these studies have contributed to a better comprehension of the interaction between leadership styles and organizational behavior, especially in education.
Proposition 3: Academic optimism mediated the linkage between authentic leadership and OCB.

3.13 OCB and Entrepreneurial Innovation Intentions
OCB has mainly indicated behavior beyond the call of duty. Such behaviors are considered beneficial for the organization as they help individuals to think of more than their self-interest (Etim et al., 2021; Zhang et al., 2008). In academia, the teaching profession requires a humanistic approach. It calls for spontaneity among teachers to remain creative and innovative while discussing topics, conducting evaluations and solving individual student problems (Srivastava & Dhar, 2019). Thus, it can be said that teachers' inclination toward creative teaching pedagogies is one way to exhibit OCB in classrooms (Srivastava & Shree, 2019).

Researchers have acknowledged that teachers' behavior in the classroom and the pedagogies adopted play an essential role in the learning efficacy of students. Students tend to develop skills and update their understanding based on the classroom culture developed by each of the teachers. In the context of the

educational supply chain, teachers' organisational citizenship behaviour (OCB) enhances students' learning intentions and willingness to excel. Such enhancement in their attitude and outlook can enable them to remain creative in their problem-solving abilities. Further, teachers' OCB to benefit each student can help students develop team management skills and thus encourage their leadership skills.

According to the study by Zhang et al. (2014), there is a positive relationship between the social norms, controlled behavior and preference for short-term risk-taking and the development of entrepreneurial intentions. This was further broadened in a study by Gozukara and Colakoglu (2016) that showed that innovativeness has a positive effect on entrepreneurial intentions, and entrepreneurial alertness mediates the effect of innovativeness on entrepreneurial intentions. In the same year Shirokova et al. (2016) filled the gap between intention and action among student entrepreneurs and found that there are numerous individual and environmental factors that are critical in the transformation of entrepreneurial intentions into actual actions. Additionally, Su et al. (2021) highlight that the perceived university support has a great influence on the attitude students have toward entrepreneurship and their behavioral control perceptions, which in turn influence their entrepreneurial intentions.

Entrepreneurial orientation and intentions are the base for letting young minds have their venture. Haddad et al. (2021) also highlight that when educational institutions provide a trusting environment and opportunities to explore individual capabilities beyond theories and practicals, students tend to become entrepreneurs and carry their passion Taşkıran, (2019) through empirical examination provided by that OCB has a positive impact on entrepreneurial orientation. Thus, based on the above discussion, it can be assumed that OCB can have an impact on entrepreneurial innovation intentions *(*EII).
Proposition 4: OCB has an impact on entrepreneurial innovation intentions

Table 2: Summary of Literature on Entrepreneurial Intentions in HEIs

Author(s)	Year	Focus Area	Key Variables/Themes	Findings/Implications
Habib & Jungthirapanich	2009	Educational Supply Chain	EduSCM execution, skill alignment	Effective EduSCM phases ensure alignment between pedagogies and entrepreneurial competencies.
O'Brien & Deans	1996	Educational Supply Chain Application	Leadership, faculty roles, student outcomes	Proposed HEI adaptation of SCM; students as both recipients and outputs of integrated processes.
Choi, Price & Vinokur	2003	Environment & Self-Efficacy	Institutional environment, self-efficacy,	Positive educational environment enhances students'

Author(s)	Year	Focus Area	Key Variables/Themes	Findings/Implications
			decision-making	confidence in risk-taking and adaptability.
Haddad, Haddad & Nagpal	2021	Institutional Impact	Leadership, peer learning, entrepreneurial intentions	Institutional support and peer interaction significantly influence entrepreneurial outcomes.
Chahal, Shoukat & Ayoubi	2024	Entrepreneurial Motivation	Entrepreneurial environment, motivation, Emotional Intelligence (EI)	Motivation mediates the relationship between institutional environment and EII.
Rahman, Fayolle, Dana & Rahman	2024	Innovative Pedagogy	Innovative teaching, TPB constructs, ANN modeling	Innovative teaching strengthens entrepreneurial intention via attitude and behavioral control.
Barba-Sánchez, Mitre-Aranda & Brío-González	2022	Environmental Awareness	Environmental awareness, TPB constructs	Environmental awareness enhances attitude and indirectly supports EII.
Anjum et al.	2020	University Support	Creativity, university support, EI	University support moderates the impact of creativity on EI; recommends strong support systems.
Bell	2019	Predictors of EI	Risk-taking, innovativeness, proactiveness, self-efficacy	Highlights subject-area variation in predictors of entrepreneurial intention.
Paray & Kumar	2020	EE and Demographics	EE, gender, age, course background	EE positively influences EII; demographic factors play a mediating role.

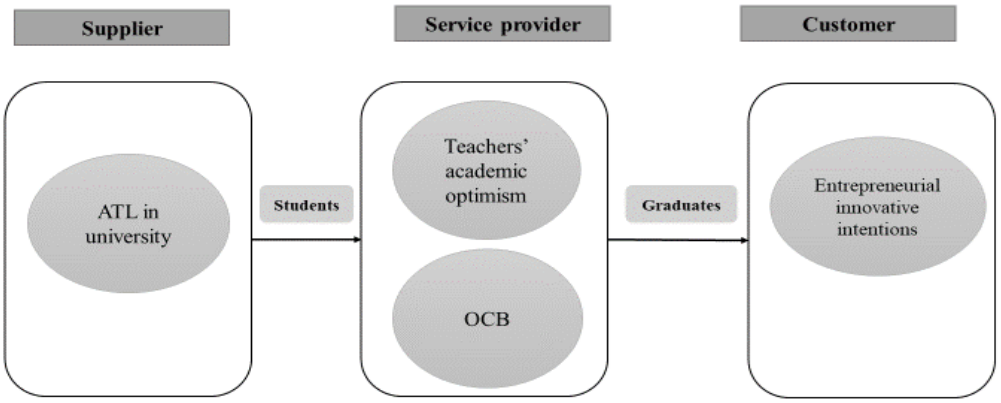

Figure 1: Proposed hypothesized model

4. Discussion

This study represents a novel attempt to conceptualize EduSCM within the Indian higher education context, particularly as it relates to entrepreneurship education. Grounded in a comprehensive review of literature, the paper developed and proposed an integrated model (see Figure 1) that connects ATL, teachers' OCB and academic optimism, with students' EII, using the TPB as a foundational framework. In doing so, the study fills a significant theoretical gap by aligning EduSCM with behavioral perspectives in higher education.

Addressing RQ1, the model highlights the potential impact of ATL on students' entrepreneurial intentions. In line with the previous research, including Diaz et al. (2019), the paper focuses on the role of the leader not only as an institutional representative but also as a key supplier in the educational supply chain. Higher education leaders are facilitators of resources, infrastructure, policy clarity and quality assurance, which are preconditions of entrepreneurial learning. By combining transformational practices with authenticity and transparency, leaders can foster trust, autonomy and a positive learning climate, directly influencing students' perceived behavioral control and entrepreneurial confidence.

Concerning RQ2, the study highlights the importance of teachers as important links in the educational supply chain. The process mechanisms that add value to the students, who are the raw material in this system, are the OCB of the teachers and their academic optimism. Teachers can become transformative intermediaries between leadership work and active student learning when they go beyond the official role, address the concerns of students, and use adaptive pedagogies, including experiential and case-based learning. Academic optimism is also high, which promotes voluntary participation, developing engaging and creativity-based classrooms, which strengthen the formation of entrepreneurial intentions.

In answering RQ3, the research demonstrates that the entrepreneurial intentions of students are greatly influenced by the learning environment in the HEIs. The environment encourages a culture of collaboration, autonomy and innovation by

combining leadership vision and faculty engagement. The interaction between leaders and teachers ensures that students are exposed to easily understandable guidance, mentorship and pedagogical support, which together affect attitudes, subjective norms and perceived behavioral control, the main elements of TPB, and thus, entrepreneurial intention formation will be integrated into a systemic educational process.

Lastly, answering RQ4, the research gives conceptual support to the fact that there is an educational supply chain in Indian higher education. In line with O'Brien and Deans (1996) and Jauhar et al. (2017), the study identifies leadership, teaching practices and learning processes as supply chain components that, when combined, can contribute to the development of growth-oriented intentions among students. Placing the TPB into this supply chain lens, the research explains the role of institutional actors as a significant other, wherein the institutional actors have an impact on the entrepreneurial performance of students via systemic interactions.

On the whole, the discussion supports the opinion that EduSCM is not just a metaphor but a pragmatic prism according to which the leadership, teaching and institutional systems jointly influence the development of entrepreneurial attitudes. The proposed model corresponds the leadership, teacher behavior, and the learning environment to the TPB framework and provides a sensible explanation of how the EII may be developed in the HEIs.

5. Implications

Over the last few years, there has been a significant increase in the field of entrepreneurship education. Institutions ought to acknowledge the necessity of leaders who possess certain skills meet the requirements of the entrepreneurship education. Leaders should be trained and counseled, particularly those who are over 40 years of age, to help them mentor young minds. Institutions ought to develop training programs that are specific to the entrepreneurship education based on leadership skills. It is suggested that strategies are designed to eliminate generational bias by means of counseling sessions and encouraging young faculty by teaching them the skills of mentoring to hold leadership positions.

Teachers have shown flexibility in the case of pandemic and post-pandemic education. Using the EduSCM insight, institutions can educate teachers to mentor and coach students in their entrepreneurship activities. Students can also be further benefited by encouraging the teachers to take time and engage in the development of business ideas, research with entrepreneurs and improve their knowledge on the future business environment.

To increase the EII of students, the HEIs should change their mindset, where they do not view them as customers but as products that will enter the industry in the future. Practical learning must be taken seriously and programs that assess the entrepreneurial capabilities of students should be conducted on a regular basis. Graduate and post-graduate levels should be offered counseling

and insight on entrepreneurship, registration procedures and patenting. To structure the process, structured and scientifically tested scales could also be used to examine the development needs of students (Srivastava et al., 2025. Through these managerial implications, the institutions will be able to provide the environment that will support the formation of entrepreneurial intentions among the students in line with the integrated model in the study.

6. Conclusion

The paper contributes to the development of a new theoretical framework that combines EduSCM with the TPB, and emphasizes the interdependence between institutional leadership, faculty behavior and student entrepreneurial intentions. The paper provides a systemic perspective to the problem of optimizing educational inputs, processes and outputs to encourage entrepreneurship among students by not separating leadership and teaching as independent variables but viewing them as nodes in a supply chain.

Importantly, the inclusion of ATL, teachers' OCB, and academic optimism contributes a behavioral dimension to EduSCM, extending its applicability beyond operational efficiency. According to the study, these human-oriented variables when adjusted to institutional objectives improve the attitude, subjective norms and perceived behavioral control as the main TPB variables that influence the entrepreneurial intention.

The Indian HEIs can shape more responsive and innovation-driven pedagogical practices by integrating the leadership vision and faculty engagement into the educational supply chain. This alignment will provide that the students not only graduate with domain knowledge, but also the intent, capability and confidence to venture into entrepreneurship. The conceptual model, thus, provides a diagnostic and developmental instrument to the institutions that seek to meet the objectives of employability, innovation and national development using an integrated supply chain logic.

7. Limitations and Future Directions

Although the proposed model has a good theoretical contribution, it does not lack limitations. To begin with, the framework is still abstract and needs to be proved empirically. The model should be tested in future research by structural equation modeling or multi-level analysis in a variety of Indian HEIs (e.g., public vs. private, urban vs. rural) to obtain institutional variation.

Second, even though this study includes leadership and teaching behaviors as essential supply chain factors, it fails to consider psychological characteristics of students (e.g., resilience, grit, risk tolerance) or external ecosystem factors (policy support, access to funding, entrepreneurial culture of the region). These variables could be included to provide a more comprehensive view of the formation of entrepreneurial intentions.

Third, the model is restricted by its national context. The sociocultural and regulatory environment in India is quite different from other countries and

comparative international studies are required to analyze the performance of EduSCM. Also, the dynamic aspect of digitalization, AI tools and post-pandemic hybrid learning ecosystems has not yet been explored in this version of EduSCM.

Lastly, longitudinal research would assist in assessing the effects of the alteration of leadership practices or pedagogical interventions on entrepreneurial outcomes in the long run. Students could also be used in future research as co-researchers to document lived experiences in the educational supply chain to improve the agency-based conceptualization of entrepreneurship development in education.

8. Acknowledgments

AI tools were used solely for proofreading and language refinement of this article; the intellectual content remains entirely the authors' own.

9. References

Anjum, T., Farrukh, M., Heidler, P., & Díaz Tautiva, J. A. (2020). Entrepreneurial intention: Creativity, entrepreneurship, and university support. *Journal of Open Innovation: Technology, Market, and Complexity, 7*(1), 11.

Antonopoulou, H., Halkiopoulos, C., Barlou, O., & Beligiannis, G. N. (2021). Transformational leadership and digital skills in higher education institutes: during *the COVID-19 pandemic. Emerging Science Journal, 5*(1), 1–15. https://www.ijournalse.org/index.php/ESJ/article/view/438

Azjen, I. (1991). The theory of planned behavior. *Organizational Behavior and Humnan Decision Processees*, *50*, 179-211.

Barba-Sánchez, V., Mitre-Aranda, M., & del Brío-González, J. (2022). The entrepreneurial intention of university students: An environmental perspective. *European Research on Management and Business Economics, 28*(2), 100184. https://doi.org/10.1016/j.iedeen.2021.100184

Bass. B. M.. and Steidlmeier. P. (1999). Ethics. Character. and authentic transformational leadership behavior. *Leadership Quarterly, 10*(2). 181-21

Bell, R. (2019). Predicting entrepreneurial intention across the university. *Education+ Training*, *61*(7/8), 815-831.

Bell, R., & Bell, H. (2020). Applying educational theory to develop a framework to support the delivery of experiential entrepreneurship education. *Journal of Small Business and Enterprise Development.* https://doi.org/10.1108/JSBED-01-2020-0012

Chahal, J., Shoukat, M. H., & Ayoubi, R. (2024). How entrepreneurial environment and education influence university students' entrepreneurial intentions: The mediating role of entrepreneurial motivation. *Higher Education, Skills and Work-Based Learning, 14*(3), 591–609. https://doi.org/10.1108/HESWBL-10-2022-0206

Choi, J. N., Price, R. H., & Vinokur, A. D. (2003). Self-efficacy changes in groups: effects of diversity, leadership, and group climate. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, *24*(4), 357-372. https://doi.org/10.1002/job.195

Díaz, E. R., Sánchez-Vélez, C. G., & Santana-Serrano, L. (2019). Integrating the five practices of the exemplary leadership model into entrepreneurship education. International *Journal for the Scholarship of Teaching and Learning, 13*(3), 10. https://doi.org/10.20429/ijsotl.2019.130310

Elrehail, H., Emeagwali, O. L., Alsaad, A., & Alzghoul, A. (2018). The impact of transformational and authentic leadership on innovation in higher education:

The contingent role of knowledge sharing. *Telematics and Informatics, 35*(4), 55–67. https://doi.org/10.1016/j.tele.2017.09.018

Erboz, G., Yumurtacı Hüseyinoğlu, I. Ö., & Szegedi, Z. (2022). The partial mediating role of supply chain integration between Industry 4.0 and supply chain performance. *Supply Chain Management: An International Journal*, *27*(4), 538-559. https://doi.org/10.1108/SCM-09-2020-0485

Etim, E. O., Goddymkpa, C. P., Madubuike, E. S., & Charlie, S. S. (2021). Organizational citizenship behaviour (OCB) and entrepreneurial effectiveness in Uyo Metropolis of Akwa Ibom State. *IAR Journal of Entrepreneurship, Innovation & Design Thinking, 2*(4).

Fardillah, L., Prasetyo, B., & Putri, R. Y. (2018, July). Transformational leadership in higher education institutions and employee satisfaction interventions. *In Proceedings of the 2nd International Conference Postgraduate School (ICPS), 1, 721–724*. Scitepress. 10.5220/0007550307210724

Farid, T., Iqbal, S., Khan, A., Ma, J., Khattak, A., & Naseer Ud Din, M. (2020). The impact of authentic leadership on organizational citizenship behaviors: The mediating role of affective- and cognitive-based trust. *Frontiers in Psychology, 11*, 1975. https://doi.org/10.3389/fpsyg.2020.01975

Fayolle, A., Gailly, B., & Lassas-Clerc, N. (2006). Assessing the impact of entrepreneurship education programmes: A new methodology. *Journal of European Industrial Training, 30*(9), 701-720. https://doi.org/10.1108/03090590610715022

Feller, J., Finnegan, P., & Hayes, J. (2006). *Open-source networks: an exploration of business model and agility issues.* Retrieved January 21, 2026 from https://aisel.aisnet.org/ecis2006/95/

Barrachina Fernández, M., García-Centeno, M. D. C., & Calderón Patier, C. (2021). Women sustainable entrepreneurship: Review and research agenda. *Sustainability*, *13*(21), 12047.

Gozukara, I., Yildirim, O., & Yildiz, B. (2016). Innovative behavior: Relations with developmental culture, Psychological empowerment, Distributive justice and organizational learning capacity. *International Business Research*, *9*(10), 186-200.

Gozukara, I., & Colakoglu, N. (2016). Enhancing entrepreneurial intention and innovativeness of university students: The mediating role of entrepreneurial alertness. *International Business Research, 9*(2), 34–45. http://dx.doi.org/10.5539/ibr.v9n2p34

Habib, M., & Zurawicki, L. (2010). The bottom of the pyramid: Key roles for businesses. *Journal of Business & Economics Research*, *8*(5), 23.

Habib, M., & Jungthirapanich, C. (2009). Research framework of education supply chain, research supply chain and educational management for the universities. International *Journal of the Computer, the Internet and Management (IJCIM), 17*(24), 1–8. 10.1109/ICMSS.2009.5303124

Haddad, G., Haddad, G., & Nagpal, G. (2021). Can students' perception of the diverse learning environment affect their intentions toward entrepreneurship? *Journal of Innovation & Knowledge*, *6*(3), 167-176.

Han, S. L., Wilson, D. T., & Dant, S. P. (1993). Buyer-supplier relationships today. *Industrial Marketing Management*, *22*(4), 331-338.

Howell, J. L., Bullington, K. E., Gregory, D. E., Williams, M. R., & Nuckols, W. L. (2022). Transformational leadership in higher education programs. *Journal of Higher Education Policy and Leadership Studies*, *3*(1).

Ilie, S., Rose, P., & Vignoles, A. (2021). Understanding higher education access: Inequalities and early learning in low and lower-middle-income countries. *British Educational Research Journal*, *47*(5), 1237-1258. https://doi.org/10.1002/berj.3723

Jain, S., Khare, A., Goel, O., & Goel, P. (2023). The impact of NEP 2020 on higher education in India: A comparative study of select educational institutions before and after the implementation of the policy. *International Journal of Creative Research Thoughts*, *11*(5), h349-h360

Jauhar, S. K., Pant, M., & Dutt, R. (2018). Performance measurement of an Indian higher education institute: A sustainable educational supply chain management perspective. *International Journal of System Assurance Engineering and Management, 9*, 180–193. https://doi.org/10.1007/s13198-016-0505-4

Jauhar, S. K., Pant, M., & Nagar, A. K. (2017). Sustainable educational supply chain performance measurement through DEA and differential evolution: A case on Indian HEI. *Journal of Computational Science, 19*, 138–152. https://doi.org/10.1016/j.jocs.2016.10.007

Jun, K., Hu, Z., & Lee, J. (2023). Examining the influence of authentic leadership on follower hope and organizational citizenship behavior: the mediating role of follower identification. *Behavioral Sciences*, *13*(7), 572.

Khalil, M. I., Haque, R., Senathirajah, A. R. S., Connie, G., & Chawdhury, B. (2022). Entrepreneurial Leadership on SME's Performance in Malaysia. *International Journal of Health Sciences*, *6*, 10758-10775.

Krug, M. T. (2015). *Academic optimism, organizational citizenship behavior, and principal support: An examination of factors effecting teacher agency in elementary schools*. (Doctoral Dissertation. The College of William and Mary). https://search.proquest.com/openview/0e7bf367228ea37edae8a878c566059b/1?pq-origsite=gscholar&cbl=18750

Kulophas, D., Hallinger, P., Ruengtrakul, A., & Wongwanich, S. (2018). Exploring the effects of authentic leadership on academic optimism and teacher engagement in Thailand. *International Journal of Educational Management*, *32*(1), 27-45.

Kumar, A. (2021). New education policy (NEP) 2020: A roadmap for India 2.0. *University of South Florida (USF) M3 Publishing*, *3*(2021), 36. https://www.doi.org/10.5038/9781955833042

Kumar, K., Prakash, A., & Singh, K. (2021). How national education policy 2020 can be a lodestar to transform future generation in India. *Journal of Public affairs*, *21*(3), e2500. https://doi.org/10.1002/pa.2500

Lau, A. K. (2007). Educational supply chain management: a case study. *On the Horizon*, *15*(1), 15-27. https://doi.org/10.1108/10748120710735239

Lee, A., Lyubovnikova, J., Zheng, Y., & Li, Z. F. (2023). Paradoxical leadership: a meta-analytical review. *Frontiers in Organizational Psychology*, *1*, 1229543.

Leffler, E. (2020). An entrepreneurial attitude: Implications for teachers' leadership skills?. *Leadership and Policy in Schools*, *19*(4), 640-654. https://doi.org/10.1080/15700763.2019.1668021

McGuigan, L., & Hoy, W. K. (2006). Principal leadership: Creating a culture of academic optimism to improve achievement for all students. *Leadership and Policy in Schools*, *5*(3), 203-229.

Meenakshi, M., & Sharma, M. R. (2022). Promoting entrepreneurship for Atamnirbhar Bharat: Toward sustainable education. *Sustainable Society: A New Beginning*, 119. https://www.researchgate.net/profile/Sivakumar-A-4/publication/357909453_SUSTAINABLE_SOCIETY_A_NEW_BEGINNING/links/61e6c64adafcdb25fd34e246/SUSTAINABLE-SOCIETY-A-NEW-BEGINNING.pdf#page=125

Nakano, M., & Matsuyama, K. (2021). Internal supply chain structure design: a multiple case study of Japanese manufacturers. *International Journal of Logistics Research and Applications*, *24*(1), 79-101.

Ndofirepi, T. M. (2020). Relationship between entrepreneurship education and entrepreneurial goal intentions: Psychological traits as mediators. *Journal of*

Innovation and Entrepreneurship, 9(1), 1–20. https://doi.org/10.1186/s13731-020-0115-x

Nichols, H. (2008). *The impact of servant leadership on the leadership development needs of student leaders* (Master's thesis, Nyack College). https://search.proquest.com/openview/488fbaed955c7d9eb4bf36a6f26cc1b8/1?pq-origsite=gscholar&cbl=18750

Ninković, S., Đorđić, D., & Olić-Ninković, S. (2023). Modeling the relationships between transformational leadership, teacher academic optimism, and teacher engagement: Evidence from the Serbian school context. *Zbornik Instituta za Pedagoska Istrazivanja*, *55*(1), 161-187.

O'Brien, E. M., & Deans, K. R. (1996). Educational supply chain: a tool for strategic planning in tertiary education?. *Marketing Intelligence & Planning*, *14*(2), 33-40.

Paray, Z. A., & Kumar, S. (2020). Does entrepreneurship education influence entrepreneurial intention among students in HEI's? The role of age, gender and degree background. *Journal of International Education in Business*, *13*(1), 55-72.

Prasetia, I., Melfayetty, S., & Dewi, R. (2020). The effect of transformational leadership and academic optimism culture on teacher empowerment and motivation along its impact on the effectiveness of Medan state junior high school. *International Journal on Language, Research and Education Studies*, *4*(2), 276-290.

Rahman, M. M., Fayolle, A., Dana, L. P., & Rahman, M. N. (2024). Predicting graduate students' entrepreneurial intentions through innovative teaching in entrepreneurship education: SEM-ANN approach. *Education+ Training*, *66*(2/3), 273-301.

Rastegar, B., & Safari, F. (2017). Output-Based Instruction, Learning Styles and Vocabulary Learning in the EFL Context of Iran. *International Journal of Education and Literacy Studies*, *5*(2), 101-111.

Ratten, V., & Usmanij, P. (2021). Entrepreneurship education: Time for a change in research direction. *The International Journal of Management Education, 19*(1), 100367. https://doi.org/10.1016/j.ijme.2020.100367

Rauf, K., & Ahmed, J. (2017). The relationship of authoritarian parenting style and academic performance in school students. *Pakistan journal of psychology*, *48*(2).

Razavi, S. H., & Ab Aziz, K. (2017). The dynamics between entrepreneurial orientation, transformational leadership, and intrapreneurial intention in Iranian R&D sector. *International Journal of Entrepreneurial Behavior & Research*, *23*(5), 769-792.

Ribeiro, N., Duarte, A. P., Filipe, R., & David, R. (2022). Does authentic leadership stimulate organizational citizenship behaviors? The importance of affective commitment as a mediator. *Sustainability Accounting, Management and Policy Journal*, *13*(2), 320-340.

Sart, G. (2014). The new leadership model of university management for innovation and entrepreneurship. *Eurasian Journal of Educational Research*, (57), 73-90. https://doi.org/10.14689/ejer.2014.57.6

Shaikh, N. F., Nili, M., Dwibedi, N., & Madhavan, S. S. (2020). Initial validation of an instrument for measuring entrepreneurial and intrapreneurial intentions in student pharmacists. *American Journal of Pharmaceutical Education*, *84*(7), ajpe7624.

Shapero, A., &Sokol, L. (1982). The social dimensions of entrepreneurship. In C. Kent, Sexton, D., Vesper, K. (Ed.), *Encyclopedia of entrepreneurship* (pp.72-90). Prentice-Hall.

Shapira-Lishchinsky, O., & Tsemach, S. (2014). Psychological empowerment as a mediator between teachers' perceptions of authentic leadership and their withdrawal and citizenship behaviors. *Educational Administration Quarterly*, *50*(4), 675-712.

Sheikh, Y. A. (2017). Higher education in India: Challenges and opportunities. *Journal of Education and Practice*, *8*(1), 39-42. https://eric.ed.gov/?id=EJ1131773

Shirokova, G., Osiyevskyy, O., & Bogatyreva, K. (2016). Exploring the intention–behavior link in student entrepreneurship: Moderating effects of individual and environmental characteristics. *European Management Journal*, *34*(4), 386-399.

Srivastava, A. P., & Dhar, R. L. (2016). Authentic leadership for teacher's academic optimism: Moderating effect of training comprehensiveness. *European Journal of Training and Development*, *40*(5), 321-344.

Srivastava, A. P., & Dhar, R. L. (2015). Training comprehensiveness: construct development and relation with role behavior. *European Journal of Training and Development*, *39*(7), 641-662. https://doi.org/10.1108/EJTD-06-2015-0039

Srivastava, A. P., Agarwal, S., Yadav, R., & Yadav, M. (2025). Diagnosing entrepreneurial readiness among women in family businesses: The WFBER scale and its institutional implications. *Industry and Higher Education*, 09504222251397489.

Srivastava, A. P., & Dhar, R. L. (2019). Authentic leadership and extra role behavior: A school based integrated model. *Current Psychology*, *38*(3), 684-697. https://doi.org/10.1007/s12144-017-9634-4

Srivastava, A. P., & Shree, S. (2019). Development of inclusive education theoretical model: Role of authentic leadership, academic optimism and art-based pedagogies. *International Journal of Educational Management*. https://doi.org/10.1108/IJEM-02-2019-0063

Srivastava, A. P., Mani, V., & Yadav, M. (2019). Evaluating the implications of stakeholder's role toward sustainability of higher education. *Journal of Cleaner Production*, *240*, 118270. https://doi.org/10.1016/j.jclepro.2019.118270

Srivastava, A. P., Shree, S., & Agarwal, S. (2022). Does authentic leadership develop inclusive classrooms: a model examination?. *International Journal of Educational Management*, *36*(4), 495-514. https://doi.org/10.1108/IJEM-07-2020-0338

Srivastava, A., Agarwal, S., & Ganapathy, M. (2022). Inclusive higher education in cross-cultural settings. *International Journal of Educational Management*, *36*(4), 357-363. https://doi.org/10.1108/IJEM-05-2022-589

Su, Y., Zhu, Z., Chen, J., Jin, Y., Wang, T., Lin, C. L., & Xu, D. (2021). Factors influencing entrepreneurial intention of university students in China: Integrating the perceived university support and theory of planned behavior. *Sustainability, 13*(8), 4519. https://doi.org/10.3390/su13084519

Taşkıran, G. (2019). The relationship between organizational citizenship behavior and entrepreneurial orientation: A research in the hospitality industry. *Procedia Computer Science*, *158*, 672-679.

Thapa, P. P., Zayed, N. M., Alam, M. N., Nitsenko, V. S., Rudenko, S., & Svyrydenko, D. (2025). Mediating and moderating role of emotional intelligence between mobile phone use and affective commitment among undergraduate students in academic institutes. *Current Psychology, 44*(8), 6610-6626.

Thomassen, M. L., Middleton, K. W., Ramsgaard, M. B., Neergaard, H., & Warren, L. (2019). Conceptualizing context in entrepreneurship education: A literature review. *International Journal of Entrepreneurial Behavior & Research, 26*(5), 863-886. https://doi.org/10.1108/IJEBR-04-2018-0258

Töre, E., & Çetin, E. (2022). The mediating role of organizational culture in the effect of school managers' authentic leadership behaviors on teachers' organizational citizenship behavior. *International Online Journal of Educational Sciences (IOJES)*.

Wagner, T., Kegan, R., Lahey, L. L., Lemons, R. W., Garnier, J., Helsing, D., Howell, A. & Rasmussen, H. T. (2012). *Change leadership: A practical guide to transforming our schools*. John Wiley & Sons.

Wang, T., Deng, M., & Tian, G. (2022). More leadership, more efficacy for inclusive practices? Exploring the relationships between distributed leadership, teacher

leadership, and self-efficacy among inclusive education teachers in China. *Sustainability*, *14*(23), 16168.

Wathanakom, N., Khlaisang, J., & Songkram, N. (2020). The study of the causal relationship between innovativeness and entrepreneurial intention among undergraduate students. *Journal of Innovation and Entrepreneurship*, *9*(1), 15.

Zakaria, M., Arifin, M. A., Yusoff, M. S. A., Sari, E. N., & Zakaria, N. B. (2021). Antecedent Factors of Women Entrepreneurs' Success: Empowering Women and Gender Equality. *Academy of Strategic Management Journal*, *20*, 1-15.

Zhang, S. (2014). Impact of job involvement on organizational citizenship behaviors in China. *Journal of Business Ethics*, *120*(2), 165-174.

Zhang, Z., Wan, D., & Jia, M. (2008). Do high-performance human resource practices help corporate entrepreneurship? The mediating role of organizational citizenship behavior. *The Journal of High Technology Management Research*, *19*(2), 128-138.