



BRIXTON SCHOLARLY REVIEW

A Multidisciplinary Peer
Reviewed Journal

Volume - 3, 2026

Brixton Scholarly Review
A Multidisciplinary Peer Reviewed Journal



BRIXTON

Research Management Cell



Published by: Brixton College, Kanchanpur

www.brixtoncollege.edu.np

099 520499 | 9705100003

Brixton Scholarly Review

Published Date : 17th April, 2026

Volume : Three

ISSN No: 3021-9817

Copy© : Reserved to Publisher

Feedback: rmc@brixtoncollege.edu.np

Brixton Scholarly Review Editorial Board

Editor-in-Chief

Dr. Nisha Bhatt

Assistant Professor, Far Western University

Editors

Ms. Priti Singh K.

Lecturer, Brixton College
preetisinghchand@gmail.com

Mr. Kapil Joshi

Lecturer, Brixton College
kapiljoshi080@gmail.com

Mr. Upendra Sunar

Lecturer, Brixton College
brixtonupen@gmail.com

Board of Advisors

Dr. Netra Raj Chataut

Chairperson, Brixton College

Dr. Bhoj Raj Pant

Principal, Brixton College

Prof. Dr. Hem Raj Pant

Former Rector of Tribhuvan University, Nepal

Prof. Dr. Prem Raj Pant

Former Rector of Tribhuvan University, Nepal

Dr. Nisha Bhatt

Assistant Professor, Far Western University, Nepal

Board of Reviewers

Prof. Dr. Mahanand Chalise

Dean, Faculty of Management, Tribhuvan University, Nepal

Prof. Dr. Hem Raj Pant

Former Registrar, Far Western University, Nepal

Prof. Dr. Padam S. Bisht

Former Dean, Kumaun University, India

Prof. Dr. Amit Aggrawal

Sundip University, Maharashtra, India

Dr. Ram Hari Lamichhane

President, Asia Pacific Accreditation and Certification Commission (APACC), Manila, Philippines

Dr. Rajendra Bir Chand

Associate Professor, Far Western University, Nepal

Dr. Nisha Bhatt

Assistant Professor, Central Campus, Far Western University, Nepal

Dr. Gambhir Chand

Assistant Professor, Central Campus, Far Western University, Nepal

Dr. Shiv Poudel

Assistant Professor, Central Campus, Far Western University, Nepal

Dr. Gyanu Raj Paudel

Assistant Professor, Tikapur Campus, Far Western University, Nepal

Mr. Harishankar Pant (Ph.D. Scholar)

Associate Professor, Central Campus, Far Western University, Nepal

Ms. Nirmala Dhami Saud (Ph.D. Scholar)

Assistant Professor, Central Campus, Far Western University, Nepal

Mr. Rajendra Prasad Joshi Saud (Ph.D. Scholar)

Assistant Professor, Central Campus, Far Western University, Nepal

Mr. Hari Singh Saud (Ph.D. Scholar)

University of Delhi, India
Assistant Professor, Central Campus, Far Western University, Nepal

Mr. Harsh Bahadur Chand (Ph.D. Scholar)

Assistant Professor, Central Campus, Far Western University, Nepal

Mr. Baburam Rawat (Ph.D. Scholar)

Assistant Professor, Central Campus, Far Western University, Nepal

Editorials

It is with great enthusiasm and pride that we announce the publication of the third volume of the Brixton Scholarly Review, a journal where the spirit of academic inquiry flourishes and the pursuit of knowledge transcends boundaries. As we mark the beginning of our journey in scholarly exploration, we are delighted to present a collection of research-based and review articles that exemplify the richness and diversity of multidisciplinary scholarship.

At the core of the Brixton Scholarly Review lies a steadfast commitment to fostering intellectual dialogue and advancing understanding across various academic disciplines. This journal serves as a global platform for scholars to share their insights, engage in rigorous discussions, and contribute to the ever-growing body of knowledge.

This issue features a vibrant array of topics spanning fields such as management, education, humanities, and social sciences. From pioneering research that challenges existing paradigms to comprehensive reviews offering fresh perspectives on established theories, each article is a testament to the dedication and intellectual rigor of its author.

A defining feature of our journal is its adherence to the highest standards of academic integrity, achieved through a meticulous peer-review process. We express our heartfelt gratitude to our esteemed reviewers, whose expertise and commitment ensure the quality and credibility of every publication.

As editors, it is a privilege to witness the intellectual journeys of scholars as they tackle complex questions, challenge prevailing norms, and contribute meaningful insights to their fields. We commend the authors featured in this volume for their unwavering dedication to the pursuit of knowledge. Beyond highlighting individual achievements, the Brixton Scholarly Review aims to be a catalyst for interdisciplinary collaboration. By uniting scholars from diverse backgrounds and areas of expertise, the journal fosters the cross-pollination of ideas, paving the way for innovative solutions to contemporary challenges.

Looking forward, we remain committed to our mission of promoting excellence in scholarship and nurturing a dynamic intellectual community. In an ever-evolving academic landscape, we pledge to uphold the values of integrity, rigor, and inclusivity that define our journal.

We extend our deepest gratitude to the authors, reviewers, editorial board members, and readers who have contributed to the success of this publication. Your dedication and engagement are integral to our growth and impact.

In closing, we invite you to delve into the pages of the Brixton Scholarly Review and celebrate the transformative power of ideas. Together, let us embark on an unbounded journey of discovery, exploration, and intellectual inquiry.

Sincerely,
Editorial Board
Brixton Scholarly Review

Brixton Scholarly Review Volume 3

Table of Contents

The Impact of Family Issues on Students' Academic Performance.....	1-18
Dr. Nisha Bhatt and Ms. Jayanti Bhatt	
Impact Of Digital Literacy on Academic Achievement Of Undergraduate Students In Kanchanpur District, Nepal.....	19-32
Dr. Gambhir Chand and Mr. Nischal Dhani	
Perceptions of Local Stakeholders on the Economic Impact of the Gaddachauki Open Border: A Descriptive Study of the Mahendranagar Market.....	33-46
Dr. Nisha Bhatt and Mr. Deepak Raj Bhatt	
Women's Financial Empowerment through Microfinance in Nepal: Evidence from Regression Analysis.....	47-66
Mr. Upendra Sunar and Mr. Baburam Rawat	
Digital Labour and Migration Intention: Evidence from Nepalese Youth in the Gig Economy.....	67-83
Ms. Priti Singh K.	
Career Development and Employee Retention: Addressing Brain Drain in Nepal.....	84-104
Ms. Jyoti Silal	
Influence of Chatgpt on Student Learning Behavior In Higher Education.....	105-120
Mr. Kapil Joshi and Ms. Sanjana Giri	

The Impact of Family Issues on Students' Academic Performance

Dr. Nisha Bhatt¹ Jayanti Bhatt² (¹Assistant Professor, Faculty of Management, Far Western University, Nepal, ²BBA Scholar, Brixton College, Nepal)

How to Cite

Bhatt, N., & Bhatt, J. (2026). The Impact of Family Issues on Students' Academic Performance. *Brixton Scholarly Review*, 3(01), 1–18. <https://doi.org/10.3126/bsr.v3i01.93437>

Abstract

The aim of this study is to investigate the impact of family-related factors on the academic performance of college students in Mahendranagar. This research employed a quantitative cross-sectional research design. The data were collected using a structured questionnaire from 85 respondents. Financial status, parental behavior, and family environment were considered independent variables. Academic performance was considered the dependent variable. The results show that financial status has a strong positive correlation with academic performance ($r = 0.600$, $p < 0.01$), along with moderate positive correlations between parental behavior ($r = 0.508$) and family environment ($r = 0.509$). Additionally, financial status was found to significantly predict academic performance in the regression analysis ($\beta = 0.403$, $p < 0.001$). On the other hand, there is no statistical significance observed with respect to parental behavior ($p = 0.273$) and family environment ($p = 0.567$). The R^2 value of the model indicates that the model explains 40.4% of the variance of academic performance. The study indicates that financial stability has a major influence on academic performance, while family-related psychosocial factors have an indirect influence. The study highlights the need to address financial issues for better academic performance of students.

Keywords: Financial status, Parental behavior, Family environment, Academic performance, Students, Mahendranagar

Introduction

The family is an essential social construct that plays a critical role in shaping an individual's psychological, emotional, and social development. This concept is viewed as a family system that comprises various family relational dynamics, such as parent-child relationships, spousal relationships, and sibling relationships (Parke, 2004). These family relational dynamics have a synergistic effect on students' development, especially their self-perception and academic achievement (Baumrind, 1967). Literature has shown that parental support, communication, and resource distribution are critical family relational dynamics that influence students' academic achievement (Coolahan et al., 2002; Mushtaq & Khan, 2012).

Academic performance, which refers to the degree to which students achieve their academic goals, is affected by both intrinsic motivation and extrinsic environmental factors (Siddiky & Haque, 2024). Among these environmental factors, family-related factors are very important in influencing student motivation (Turner & Johnson, 2003). Therefore, a family environment that is conducive and nurturing

to a student helps to build self-confidence in their ability to learn. However, an unfavorable family environment can act as an impediment to a student's academic performance.

Besides emotional and psychological support, family socioeconomic status is another important factor in influencing student motivation. Educational equity is defined as "the idea that all students should receive an equal chance to achieve in school and that schools should provide equal access to resources and support systems to ensure student success" (Clune, 1994). However, differences in family conditions, which include economic instability and parental conflict with low levels of support, can contribute to differences in student motivation.

Education is considered to be a driving force behind individual/national development; it builds human capital, boosts productivity, and stimulates innovation (Heckman, 2011). However, academic performance is not solely influenced by institutional factors; personal/contextual factors, especially those related to the family environment, also contribute to academic performance (Clemens & Oelke, 1967). Psychological stress related to financial problems, health problems, or poor family relations may affect academic performance negatively (Brackney & Karabenick, 1995). Besides that, poor family relations may also add pressure to academic performance, thereby negatively impacting it (Kenny & Rice, 1995).

Although there is substantial research conducted to understand the impact of the family environment on academic performance, there is still a gap in research related to Nepal, especially Mahendranagar. Most of the research is conducted from the perspective of academic performance without exploring the psychosocial aspects of the family environment. There is limited research conducted to understand how economic, behavioral, and environmental aspects of the family environment are related to each other through a single framework.

In response to this gap in knowledge, this study aims to investigate the role that three important variables play in affecting student performance. These variables are financial status, parental behavior, and family environment. The hypotheses that are proposed are based on the premise that all three variables are related to student performance in a positive manner.

Literature review

This family-students academic performance has been researched in the literature on education and psychology. The relationship between the family and the academic performance of the student may be understood by taking a multidimensional approach to understanding the structural, economic, and psychosocial aspects of the family. The family unit, according to the systems theory, is a unit where all the components, like parent relationships, parent-child communication, and parent-child emotional environment, interact to influence the child's development and academic performance (Parke, 2004). The disruption in this unit, like financial instability, family conflicts, and lack of support, has been

known to affect the student's psychological outcomes, which in turn affects academic performance (Kenny & Rice, 1995).

From a socioeconomic point of view, it is not possible to ignore the importance of family background with respect to opportunities for education. From a socioeconomic theory point of view, access to financial resources has been considered an important factor, which affects the extent of the actualization of opportunities for education. For example, access to learning materials, tutoring, and a conducive learning environment has been considered important with respect to student performance (Gobena, 2018; Pant, 2020). From an empirical point of view, it has been established that socioeconomic theory has some truth, as students from a higher socioeconomic background have a higher chance of performing better at school due to their access to opportunities for education. Further research has established that socioeconomic status not only affects student performance but does so through other factors as well, such as parental involvement

In order to add another dimension to the economic approach, social capital theory has also emphasized the role of parental involvement, communication, and support in order to enhance the academic performance of their children (Latu, 2021; Coleman, 1988). For example, it has been observed that when parents become involved in their children's education, it has a positive impact on the motivation, cognitive, and academic performance of their children. However, it has also been observed that the impact of parental involvement varies depending on the nature of involvement, as supportive and autonomy-enhancing involvement has a more positive impact on the student than controlling and pressurizing involvement.

Family environment, which is related to physical and emotional factors, is another important aspect to consider in this regard. A conducive family environment is likely to result in the building up of positive psychological factors like self-confidence, motivation, and emotional stability in students, which are important in determining academic success (Akinleke, 2017; Latu, 2021). However, dysfunctional family environments have negative effects on students' mental health and academic performance. Today, research has proved that family cohesion, support, and harmonious relationships have a positive impact on academic performance, while dysfunctional family environments result in stress, depression, and lack of academic motivation in students

The recent empirical research also supports the idea of the complex and interdependent nature of the aforementioned family-related factors in relation to their impact on academic performance. A review of the determinants of academic achievement in students suggests that the aforementioned family-related variables are integral aspects of the overall ecological model of influences on student performance. This supports the idea that academic performance is not the result of a single factor but is influenced by the interaction of multiple influences.

In addition to that, emerging research has also started to examine the mediating and moderating processes through which family influences affect academic performance. For example, emerging research has shown that parental involvement acts as a mediator between socioeconomic status and academic performance; that is to say that financial status is not the only factor that affects academic performance without parental involvement. Similarly, research has shown that motivational factors are the key processes through which parental influences affect academic performance; that is to say that emotional support is critical for learning.

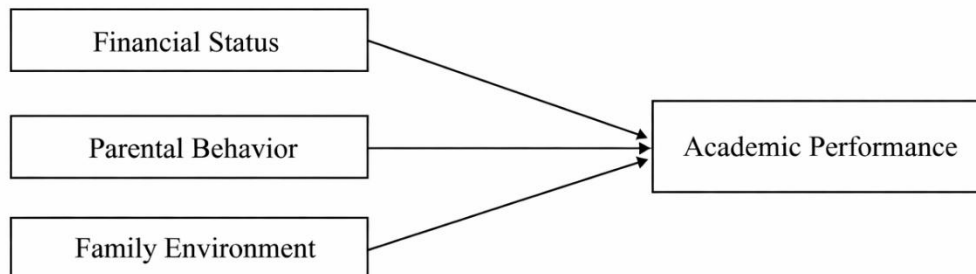
However, despite the large body of literature in this area, inconsistencies in findings with regard to the relative importance of different family factors are evident. While some studies point to the dominant role played by socioeconomic status in family influences, others point to the importance of parental involvement and family environment, suggesting that these factors are more likely to be complementary to one another. Moreover, most existing studies focus on different family influences in isolation from one another, which limits a holistic understanding of these factors in a unified manner.

In Nepal, there is limited research on the joint influence of financial status, parental behavior, and family environment on academic performance. Existing research by Pant (2020) and Neupane & Gurung (2021) has offered some insights on the role of financial status. However, findings on parental behavior are inconsistent. Therefore, there is a need to conduct Nepal-specific research to examine the joint influence of financial status and parental behavior on academic performance. The current study has employed an integrated approach, where financial status represents the economic dimension, and parental behavior/family environment represents the social-emotional dimension of academic performance. This study attempts to fill existing gaps in the literature on academic performance to provide a more cohesive understanding of family-related factors.

Conceptual Framework

Following the theoretical underpinnings of family systems theory, socioeconomic theory, and social capital theory, this research proposes a conceptual framework. The framework addresses both the economic and psychosocial aspects of family influence on academic performance. The conceptual framework assumes that student academic performance is mediated by three primary factors: financial status, parental behavior, and family environment. Financial status refers to the structural and economic capability of the family to deliver educational resources and opportunities; in this research, financial status refers to the extent to which the student has access to essential educational resources and opportunities. Following the postulations of socioeconomic theory, financial status is expected to have a direct relationship with student academic performance by offering the student the resources essential to educational engagement (Gobena, 2018; Pant, 2020). Parental behavior refers to the qualitative aspects of the parent-student relationship. The study uses social capital theory to show that parental behavior has a positive impact on academic performance. Under this theory, parental behavior is seen

as a resource that has the potential to influence motivation, discipline, and involvement in the student's academic performance (Latu, 2021; Coleman, 1988). Positive parental behavior is expected to influence academic performance by enhancing the student's psychological preparedness.



Source: Adapted from Gu, Hassan, & Sulaiman (2024)

Based on the conceptual framework and prior literature, the following hypotheses are proposed:

H1: Financial status has a significant positive relationship with students' academic performance.

H2: Parental behavior has a significant positive relationship with students' academic performance.

H3: Family environment has a significant positive relationship with students' academic performance.

Methodology

This study employed a quantitative cross-sectional research design in investigating the impact of factors related to the family on the academic performance of students. The quantitative research design is considered most suitable in this study since it allows the measurement of the variables, which is important in testing the hypotheses to be tested in this study. Moreover, this study employed a cross-sectional research design, which enables the collection of data in a single point in time. The cross-sectional design is most suitable in establishing the patterns of association and establishing the predictive relationships between the variables in a given population.

The target group for this study is comprised of college students aged 18 years and above enrolled in various educational institutions in Mahendranagar. This group is considered appropriate for the study because they are academically mature and may have been influenced by various kinds of family influences at a critical period of educational development. A total of 85 respondents were selected for the study using the convenience sampling method. Convenience sampling is considered most appropriate for this study because of the limitations of the study. Convenience sampling is considered to be a non-probability sampling method; though it is limited in many aspects, it is still the most common method of sampling in social science research.

The data collection instrument used to collect the data for this study was a structured questionnaire that was conducted through an online platform. This helped to efficiently collect the data. The questions were formulated based on existing literature. The questions were divided into several sections. The first section of the questionnaire collected demographic variables such as age, gender, education level, and marital status. The second section of the questionnaire collected family background variables such as family structure, income level, and other related factors. The third section of the questionnaire collected the variables of interest to this study, such as financial status, parental behavior, family environment, academic performance, among others. These variables were measured by several questions that were formulated using a five-point Likert scale ranging from strongly disagree to strongly agree. This helped to quantify the variables.

Before conducting the study, a pilot study was conducted to assess the validity of the questions. This helped to assess the reliability of the questions. Based on the pilot study, the questions were refined to enhance the validity of the study. After conducting the study, the data collected was carefully examined to ensure that it was accurate.

The study aims to establish the link between three independent variables: financial status, parental behavior, and family environment, and one dependent variable: academic performance. The financial status is a measure of the financial condition of the students' family. Parental behavior encompasses various dimensions such as communication, emotional support, and involvement in academic activities. Family environment encompasses various dimensions. On the other hand, academic performance is a measure of students' perceived academic achievement, satisfaction, and ability to handle academic activities. Each dimension has various measures to represent it.

In addition, data analysis was performed using IBM SPSS Statistics 30.0. This software has been recognized in the scientific community as a first-rate tool for quantitative data analysis. The analysis of the collected data was performed in two ways. Firstly, descriptive statistical analysis, which includes frequency, percentage, means, and standard deviation, was employed. This approach helped in understanding the trends. Secondly, inferential analysis of the collected data was performed. In this regard, Pearson correlation analysis was used to analyze the relationship between independent variables and academic performance. Furthermore, multiple regression analysis was performed to analyze the predictability of financial status, parents' behavior, and family environment on academic performance. The level of significance in the study was set at 0.01 and 0.05.

The regression model employed in this study is expressed as:

$$AP = \alpha + \beta_1 FS + \beta_2 PB + \beta_3 FE + \varepsilon$$

Where:

AP = Academic Performance

FS = Financial Status

PB = Parental Behavior

FE = Family Environment

α = Intercept

$\beta_1, \beta_2, \beta_3$ = Regression coefficients

ε = Error term

Ethical issues were carefully adhered to at every step of the research. The research was purely voluntary, and respondents were adequately enlightened about the study. Confidentiality and anonymity were fully observed, and the research was purely for academic purposes.

Results

The data were analyzed using descriptive and inferential statistical methods. Descriptive statistical methods such as frequency distribution, percentage distribution, mean, and standard deviation were used to understand the respondents and their attitudes. To understand the relationship between the variables of family factors and academic performance, correlation analysis and multiple regression analysis were conducted. The significance level of 0.01 and 0.05 was considered.

Descriptive Profile of Respondents

The Descriptive Profile of Respondents is an overview of the most important attributes of the research subjects. The details include their age, sex, education level, occupation, financial status, among others. This part aims to help the reader comprehend the respondents and give accurate meaning to the research outcomes and significance.

Table 1

Demographic Profile of Respondents

Variable	Category	Frequency	Percentage
Gender	Male	30	35.3%
	Female	55	64.7%
Age	Below 20	20	23.5%
	20–25	56	65.9%
	25–30	8	9.4%
	Above 30	1	1.2%
Education Level	Intermediate	10	11.8%
	Bachelor	62	72.9%
	Masters and Above	13	15.3%
Marital Status	Single	76	89.4%

	Married	9	10.6%
Religion	Hindu	76	89.4%
	Buddha	4	4.7%
	Christian	3	3.5%
	Muslim	2	2.4%
Income Level	Below 10000	50	58.8%
	10000–20000	18	21.2%
	20000–30000	8	9.4%
	Above 30000	9	10.6%
Total		85	100%

Source: SPSS

The demographic information provided about the respondents creates a good overview of the general setting in which the data was collected. With regard to the information about the gender of the respondents, it is evident that the data collected is more likely to represent the views and opinions of females compared to males. This is because the number of females (64.7%) is significantly higher than the number of male respondents (35.3%). With regard to the information about the age distribution of the respondents, it is evident that the majority of the respondents (65.9%) fall in the 20-25 age category. This is closely followed by the category of respondents who were below 20 years at the time of data collection (23.5%). This information suggests that the data was collected among young adults who were actively engaged in their studies. The category of respondents who were between 25-30 years was smaller in number (9.4%), and only 1.2% were above 30 years. With regard to the information about the educational level of the respondents, it is evident that the majority (72.9%) held a bachelor's degree. This is followed by those who held a master's degree (15.3%) and those at an intermediate level (11.8%). This information suggests that the data collected was primarily based on the academic experiences of the respondents at the bachelor's level. With regard to marital status, it is evident that the majority (89.4%) were single. This suggests that the data collected was primarily based on the views and opinions of people who were probably concentrated in their studies. With regard to the information about the religion of the respondents, it is evident that the majority (89.4%) were Hindus. This was followed by Buddhists (4.7%), Christians (3.5%), and Muslims (2.4%). With regard to the information about the income levels of the respondents, it is evident that the majority (58.8%) fell in the lowest category. This category comprised people whose monthly income was below NPR 10,000.

Family Background and Issues

Table 2

Family Structure

Family Structure	Frequency	Percentage
------------------	-----------	------------

Nuclear	36	42.4%
Joint	39	45.9%
Single Parent	10	11.8%
Total	85	100%

Source: SPSS

Moreover, the analysis of family structure (Table 7) shows that most respondents are from joint families (45.9%), followed by nuclear families (42.4%), while a smaller proportion of respondents are from single-parent families (11.8%). The above result is related to the fact that extended family systems are common in the study area.

Table 3

Conflictive Family

Conflictive Family	Frequency	Percentage
Yes	15	17.6%
No	58	68.2%
Maybe	12	14.1%
Total	85	100%

Source: SPSS

As far as family dynamics are concerned, Table 8 indicates that the majority of respondents (68.2%) perceive their families to be non-conflictive, while 17.6% report conflict, and 14.1% are unsure. This indicates that most students are situated in relatively stable family settings.

Table 4

Relationship with Parents

Response	Frequency	Percentage
Yes	72	84.7%
No	8	9.4%
Maybe	5	5.9%
Total	85	100%

Source: SPSS

In the same breath, as illustrated in Table 9 below, the proportion of people who enjoy positive relations with their parents is quite significant (84.7%). It means that not many participants have negative or neutral relationships with their parents (9.4% and 5.9% respectively). It thus means that most people have positive family relations with their parents, while others do not.

Table 5

Communication Gap

Communication Gap	Frequency	Percentage
-------------------	-----------	------------

Yes	14	16.5%
No	58	68.2%
Maybe	13	15.3%
Total	85	100%

Source: SPSS

Moreover, in Table 10, it is identified that 68.2% of respondents affirm that they do not perceive any communication gap in their families. This suggests that interpersonal communication in most families is effective. However, the existence of respondents who perceive a communication gap or uncertainty in family relationships suggests that interpersonal communication in families is not homogeneous.

Table 6

Family Issues Experienced

Issue	Frequency	Percentage
Financial difficulties	42	49.4%
Parental conflict	13	15.3%
Health issues	38	44.7%
Parental separation	8	9.4%
Nothing	27	31.8%

Source: SPSS

The percentages in Table 11 show that family-related issues that most respondents face are economic problems (49.4%), followed by health-related problems (44.7%), parental conflict (15.3%), and parental separation (9.4%). However, 31.8% of respondents affirm that they face no family-related issues.

Table 7

Issues Affecting Academic Performance

Issue	Frequency	Percentage
Financial difficulties	49	57.6%
Parental conflict	22	25.9%
Health issues	33	38.8%
Parental separation	9	10.6%
Nothing	8	9.4%

Source: SPSS

Most importantly, however, Table 12 illustrates that financial problems are identified as the most important factor influencing academic performance (57.6%), followed by health-related problems (38.8%) and parental conflict (25.9%). Again, this emphasizes the role of financial constraints in influencing student academic performance.

Descriptive Analysis of Study Variables

Table 8

Financial Status

Statement	SD	D	N	A	SA	Total	Mean	Standard Deviation
My family's financial status is stable.	10	14	24	29	8	85	3.15	1.16
Income of my family is enough to support my education.	15	17	14	28	11	85	3.04	1.331
My parents always support me financially.	13	9	13	28	22	85	3.44	1.384
Financial difficulties affect my access to resources.	15	17	25	19	9	85	2.88	1.248
Weighted Average							3.1265	0.91011

Source: SPSS

The descriptive statistical analysis on the financial status (Table 15) reveals that the respondents have a moderate level of agreement on their financial conditions. The weighted average mean value of 3.1265 reveals that the respondents perceive their financial status to be stable. However, the standard deviations on financial conditions reveal that the respondents have different financial experiences. Although the financial support received from their parents appears to be stable (mean = 3.44), their perceptions on their income sufficiency and availability of resources are neutral. This reveals that financial stability is not universally experienced.

Table 9

Parental Behavior

Statement	SD	D	N	A	SA	Total	Mean	Standard Deviation
My parents communicate well with each other.	10	8	10	37	20	85	3.58	1.276
Behavior of my parents is friendly with me.	14	8	11	31	21	85	3.44	1.393
My parents support me emotionally.	11	10	6	30	28	85	3.64	1.387
My parents are actively involved in my academic life.	11	9	10	36	19	85	3.51	1.306
Weighted Average							3.5382	1.17546

Source: SPSS

In terms of parental behavior (Table 16), all the parental behavior indicators have a mean value greater than 3.4. The weighted average mean value is 3.5382. This reveals that the respondents perceive their

parents' behavior to be positive. This is particularly true in terms of their emotional support (mean = 3.64), communication (mean = 3.58), and academic involvement (mean = 3.51). This reveals that the majority of the respondents have positive parental interactions.

Table 10

Family Environment

Statement	SD	D	N	A	SA	Total	Mean	Standard Deviation
My family environment is friendly.	13	8	10	31	23	85	3.51	1.411
My family members help each other in difficult situation.	11	9	10	28	27	85	3.6	1.366
My family's reaction to my academic performance influences my motivation.	8	5	16	40	16	85	3.6	1.177
There is no gender discrimination in my family.	6	9	7	28	35	85	3.92	1.256
Weighted Average							3.6441	0.99356

Source: SPSS

Similarly, the analysis of the family environment (Table 17) shows positive perceptions, with all mean values above 3.5 and a weighted average mean value of 3.6441. The highest mean value, 3.92, is related to the absence of discrimination between genders, showing a strong perception of fairness in the family environment. Moreover, the relatively high mean values related to family support (3.6) and motivational influence (3.6) emphasize the influence of the family environment on academic motivation. However, the variation in responses may imply that not all students have equal support in their environment.

Table 11

Academic Performance

Statement	SD	D	N	A	SA	Total	Mean	Standard
I have always scored good marks in	13	10	15	37	10	85	3.26	1.264
I am happy with my academic	8	17	14	34	12	85	3.31	1.195
Family issues influence my time	9	20	16	26	14	85	3.19	1.268
Family issues significantly impact	7	16	25	20	17	85	3.27	1.199
I can perform better with parental	6	12	14	32	21	85	3.6	1.217
Weighted Average							3.3247	0.82749

Source: SPSS

Concerning academic performance (Table 18), the mean values vary from 3.19 to 3.6, with a weighted average mean value equal to 3.3247. The results show moderate levels of perceived academic performance by the respondents. In particular, the highest mean value, 3.6, is related to the perception that parental support is related to academic performance, which again shows the importance of family

support. However, relatively low mean values are related to time management and the impact of family issues on academic performance, showing some ambiguity in the influence of the family environment on academic performance.

Correlation Analysis

Table 12

Correlation Matrix

Variable	FS	PB	FE	AP
FS	1			
PB	0.566**	1		
FE	0.598**	0.841**	1	
AP	0.600**	0.508**	0.509**	1

Note: Correlation is significant at the 0.01 level (2-tailed)

Source: SPSS

The correlation matrix shown in Table 19 indicates that there is a significant positive correlation between the study variables. For instance, there is a strong positive correlation between financial status and academic performance ($r = 0.600$), indicating that financially stable students tend to have better academic performance. On the other hand, there is a moderate positive correlation between parental behavior ($r = 0.508$) and family environment ($r = 0.509$) and academic performance, indicating that these factors contribute to academic performance to some extent.

Furthermore, the strong relationship between parental behavior and family environment is shown through their correlation value of 0.841. This may show that these variables contribute to academic performance jointly rather than independently.

Regression Analysis

Table 13

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error
1	0.636	0.404	0.382	0.65054

Source: SPSS

The regression model summary (Table 20) indicates that there is a moderate level of relationship between independent variables and academic performance, as shown through the value of $R = 0.636$. The value of R^2 is 0.404, indicating that 40.4% of the variance of academic performance is due to financial status, parents' behavior, and family environment.

Table 14 (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	23.239	3	7.746	18.304	<0.001
Residual	34.279	81	0.423		

Total	57.518	84
-------	--------	----

Source: SPSS

The ANOVA results in Table 21 reveal the regression model as statistically significant, as indicated by $F = 18.304$, $p < 0.001$. This reveals the contribution of independent variables in explaining the variance in academic performance.

Table 15

Coefficients

Variable	B	Std. Error	Beta	t	Sig.
Constant	1.336	0.293		4.568	<0.001
FS	0.403	0.098	0.443	4.097	<0.001
PB	0.125	0.113	0.177	1.104	0.273
FE	0.079	0.137	0.095	0.575	0.567

Source: SPSS

The coefficients table (Table 22) gives further insight into the individual contributions made by each predictor. Financial status is identified as a statistically significant predictor in determining academic performance ($\beta = 0.403$, $p < 0.001$), thus confirming the hypothesis that financial status is a critical factor in determining academic performance. Parental behavior ($p = 0.273$) and family environment ($p = 0.567$), however, are not statistically significant and thus show that they play an insignificant role in determining academic performance.

The findings show that parental behavior and family environment are both positive predictors in determining academic performance but that they play an indirect role in determining academic performance. Additionally, the findings show that financial status is a critical factor in determining academic performance in that it was a dominant predictor in the regression model.

Discussion

The major aim of this study was to examine the family-related factors, which include financial status, parent behaviors, and family environments, that have an impact on the academic performance of students. The study findings of this research are useful in providing valuable evidence regarding the relative importance of the financial status and psychosocial aspects of family life, especially among college students in Mahendranagar.

The most important study finding of this research study is that financial status has a major impact on the academic performance of students. The study findings reveal that financial status has a statistically positive influence on academic performance. This indicates that students who come from sound financial backgrounds have the ability to attain better academic performance. This research finding is consistent with the literature, which reveals that financial status has a major impact on the academic performance of students (Pant, 2020; Gobena, 2018). This is because financial status enables students

to access basic academic resources, which are important for improving academic performance. In developing countries like Nepal, financial status has a major obstacle for improving the academic performance of students, especially because of the huge difference between the rich and the poor.

Although parental behavior and family environment have moderate positive relationships with academic performance, they did not emerge as statistically significant predictors in the regression analysis. This indicates that although these predictors have a positive relationship with academic performance, their independent influence on academic performance may be limited once financial status is controlled. This study partially confirms earlier findings by Latu (2021) and Akinleke (2017) on the need to consider parental involvement and family environment as they relate to academic performance. However, this study indicates that these predictors may not have a direct influence on academic performance but rather have an indirect influence.

The difference between the findings of correlation analysis and regression analysis is a feature that deserves special attention. On the one hand, correlation analysis has revealed moderate positive relationships between parental behavior, family environment, and academic performance. On the other hand, these relationships are not sustained in regression analysis. A possible reason for this difference is that parental behavior and family environment are closely interconnected ($r = 0.841$). These two features may be viewed as complementary dimensions of a more general psychosocial construct. Therefore, when financial status enters the regression equation, it may overshadow the role of these interconnected features.

Moreover, the findings of the descriptive study support the assumption that financial issues are central to the academic experiences of students. The most common issues faced by students in their families include financial issues (49.4%), followed by health issues (44.7%). In addition, financial issues have been identified as the most critical issues affecting the academic performance of students by 57.6%. The current study is in line with previous studies indicating that family-related issues, particularly financial issues, may have a negative impact on the psychological well-being and academic performance of students (Deng et al., 2022; Bahrassa et al., 2011). Financial issues may hinder students from accessing academic resources, besides having a psychological impact on them.

It is noteworthy that there is a certain paradox that arises from the study findings; that is, although the majority of respondents had reported a positive relationship with their parents, communication skills, and a supportive family environment, these were not statistically significant predictors of academic performance. This may indicate that although a supportive family environment is beneficial for academic performance, it may not be enough to promote academic performance without the corresponding financial resources.

On a broader scale, the study highlights the multidimensional nature of academic performance, indicating that economic factors might have a more determining power compared to psychosocial

factors. Although family dynamics have a bearing on the general development of students, their bearing on academic performance seems to be limited, possibly through other factors as well.

The present study makes a significant contribution to the existing literature by providing context-specific data from Mahendranagar, thus filling a major research gap in Nepali studies. By incorporating the economic and psychosocial aspects of academic performance through a common analytical framework, the study offers a more holistic picture of the family dynamics that affect academic performance. The study highlights the importance of addressing financial disparities while acknowledging the positive aspects of family dynamics for academic performance.

Conclusion

The aim of this study is to examine the impact of factors related to the family environment, such as financial status, behavior of parents, and the environment of the family, on the academic performance of the student. This study is conducted among college students in Mahendranagar. It is evident from the study that financial status is the most important factor that impacts the academic performance of the student. It is more likely for the student to achieve higher grades if he/she is from a financially stable background than from an unstable background. Although there is a positive relationship between the behavior of parents and the environment of the family with the academic performance of the student, these factors have been found to be statistically insignificant. This may indicate that although the behavior of parents and the environment of the family are responsible for impacting the academic performance of the student, they may not be solely responsible for impacting the academic performance of the student in the face of economic problems. Furthermore, financial issues, health problems, and parental conflicts have been identified as the most common family-related issues faced by students. Nevertheless, financial issues have been identified as the most important factor that affects students' academic performance. This further emphasizes the importance of financial issues with respect to students' academic performance. Thus, it can be concluded that family support and parental behaviors are important with respect to students' academic performance; at the same time, financial issues are important with respect to students' academic performance. Thus, in order to enhance students' academic performance, it is necessary to provide emotional support as well as financial support.

References

Agus, A., & bin Mohamed Makhbul, Z. K. (2002). An empirical study on academic achievement of business students in pursuing higher education: An emphasis on the influence of family backgrounds. *New Paradigm of Borderless Education: Challenges, Strategies, and Implications for Effective Education through Localization*, 168–190.

- Akinleke, W. O. (2017). Impact of family structure on the academic performance of secondary school students in Yewa local government area of Ogun State, Nigeria. *International Journal of Sociology and Anthropology Research*, 3(1), 1–10.
- Bahrassa, N. F., Syed, M., Su, J., & Lee, R. M. (2011). Family conflict and academic performance of first-year Asian American undergraduates. *Cultural Diversity and Ethnic Minority Psychology*, 17(4), 415–426. <https://doi.org/10.1037/a0024722>
- Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behavior. *Genetic Psychology Monographs*, 75(1), 43–88.
- Brackney, B. E., & Karabenick, S. A. (1995). Psychopathology and academic performance: The role of motivation and learning strategies. *Journal of Counseling Psychology*, 42(4), 456–465. <https://doi.org/10.1037/0022-0167.42.4.456>
- Clemens, H. M., & Oelke, M. C. (1967). Factors related to reported problems of adolescents. *The Personnel and Guidance Journal*, 45(7), 697–702. <https://doi.org/10.1002/j.2164-4918.1967.tb03632.x>
- Clune, W. H. (1994). The shift from equity to adequacy in school finance. *Educational Policy*, 8(4), 376–394. <https://doi.org/10.1177/0895904894008004003>
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94(Supplement), S95–S120. <https://doi.org/10.1086/228943>
- Coolahan, K., McWayne, C., Fantuzzo, J., & Grim, S. (2002). Validation of a multidimensional assessment of parenting styles for low-income African-American families with preschool children. *Early Childhood Research Quarterly*, 17(3), 356–373. [https://doi.org/10.1016/S0885-2006\(02\)00169-2](https://doi.org/10.1016/S0885-2006(02)00169-2)
- Deng, Y., Cherian, J., Khan, N. U. N., Kumari, K., Sial, M. S., Comite, U., & Popp, J. (2022). Family and academic stress and their impact on students' depression level and academic performance. *Frontiers in Psychiatry*, 13, 869337. <https://doi.org/10.3389/fpsy.2022.869337>
- Gobena, G. A. (2018). Family socio-economic status effect on students' academic achievement at college of education and behavioral sciences, Haramaya University, Eastern Ethiopia. *Journal of Teacher Education and Educators*, 7(3), 207–222.
- Gu, X., Hassan, N. C., & Sulaiman, T. (2024). The relationship between family factors and academic achievement of junior high school students in rural China: Mediation effect of parental involvement. *Behavioral Sciences*, 14(3), 221. <https://doi.org/10.3390/bs14030221>

- Heckman, J. J. (2011). The economics of inequality: The value of early childhood education. *American Educator*, 35(1), 31–35.
- Kenny, M. E., & Rice, K. G. (1995). Attachment to parents and adjustment in late adolescent college students: Current status, applications, and future considerations. *The Counseling Psychologist*, 23(3), 433–456. <https://doi.org/10.1177/0011000095233004>
- Latu, L. V. (2021). Family structure and the academic success of students in secondary schools. *Tonga Journal of Education*, 2, 39–51.
- Mushtaq, I., & Khan, S. N. (2012). Factors affecting students' academic performance. *Global Journal of Management and Business Research*, 12(9), 17–22.
- Neupane, D., & Gurung, S. K. (2021). Influence of parental socio-economic status on students' academic performance: Experience from Pokhara University, Nepal. *International Journal of Multidisciplinary Perspectives in Higher Education*, 6(2), 50–67.
- Pant, K. R. (2020). Influences of parental socio-economic status on academic achievement: A case study of rural communities in Kailali, Nepal. *Contemporary Research: An Interdisciplinary Academic Journal*, 4(1), 95–109.
- Parke, R. D. (2004). Development in the family. *Annual Review of Psychology*, 55(1), 365–399. <https://doi.org/10.1146/annurev.psych.55.090902.141528>
- Siddiky, M. R., & Haque, I. E. (2024). Factors affecting students' academic performance mediated by their motivation for learning. *Asian Journal of University Education*, 20(1), 15–27. <https://doi.org/10.24191/ajue.v20i1>
- Turner, L. A., & Johnson, B. (2003). A model of mastery motivation for at-risk preschoolers. *Journal of Educational Psychology*, 95(3), 495–505. <https://doi.org/10.1037/0022-0663.95.3.495>

Impact of Digital Literacy on Academic Achievement Of Undergraduate Students In Kanchanpur District, Nepal

Dr. Gambhir Chand¹ Nischal Dhama² (¹Assistant Professor, Faculty of Management, Far Western University, Nepal, ²BBA Scholar, Brixton College, Nepal)

How to Cite

Chand, G., & Dhama, N. (2026). Impact of Digital Literacy on Academic Achievement Of Undergraduate Students In Kanchanpur District, Nepal. *Brixton Scholarly Review*, 3(01), 19–32. <https://doi.org/10.3126/bsr.v3i01.93441>

Abstract

In the context of higher learning institutions, the concept of digital literacy has gained significant attention as a vital learning outcome in the modern era of technology-mediated learning environments, wherein students utilize technology extensively to achieve their academic objectives. While the prior literature established a strong relationship between academic achievement and digital literacy, there exists a lack of empirical evidence of the effect of digital literacy on the academic achievements of students in the context of the developing nations of the world, especially in the context of the nation of Nepal. In this context, the present study aims to investigate the effect of digital literacy on the academic achievements of undergraduate students in Kanchanpur District of Nepal. The descriptive-analytical method of research was used in the study, wherein the data were collected from a sample of 100 undergraduate students of Brixton College. The study found that the students have a moderate to high level of digital literacy skills, with a mean value of 3.95 on a five-point Likert scale. Moreover, the study established that the students have a higher level of skill in the practical application of technology than in the critical evaluation of online information. Finally, the study established a strong positive relationship between digital literacy skills and academic achievements of the students ($r = .62, p < 0.01$). Despite the positive outcomes of the study, there have been several challenges in the application of the skills of digital literacy.

Keywords: Academic Achievement, Digital Literacy, Digital Skills, Higher Education, Nepal, Semi-Urban Context, Technology Use, Undergraduate Students

Introduction

The fast-evolving nature of digital technologies has significantly impacted the evolution of higher education systems worldwide. Contemporary higher education institutions have begun to adopt digital platforms, online tools, and information and communication technologies to facilitate learning processes. In the context of the changing education system, digital literacy is considered a critical learning skill set for undergraduate students to efficiently access information, navigate digital environments, engage in digital communication processes, and execute academic activities.

Digital literacy is considered a complex multidimensional concept as it transcends the boundaries of technological competencies to encompass a broad range of learning skills, such as information literacy,

media literacy, communication competencies, ethical competencies, and critical thinking competencies (Eshet-Alkalai, 2004; Martin & Grudziecki, 2006). Digital literacy is considered the integration of the technological, cognitive, and socio-ethical dimensions of learning processes, as explained by Martin & Grudziecki (2006). Digital literacy is considered relevant to the changing learning processes with the concomitant expansion of blended learning processes in the higher education system.

A considerable volume of literature highlights the positive impact of digital literacy on improving student academic performance. For instance, empirical studies reveal that students with higher digital literacy skills are more likely to cope with scholarly information and demands and adapt to a digitally facilitated academic environment (Naz et al., 2022; Wu & Yuan, 2023). In addition to this positive impact on academic performance, digital literacy can also play a significant role in cultivating learning adaptability and self-directed learning skills, which are critical to student success. Despite the established positive impact of digital literacy on academic performance, this phenomenon does not occur uniformly across various contexts. In developing countries like Nepal, digital technology adoption in higher education is not uniform. For example, while higher education institutions in urban areas can enjoy better digital technology facilities compared to their counterparts in other areas, higher education institutions in semi-urban and rural areas face a host of challenges in accessing digital technology and institutional support (Acharya et al., 2021; Saud, 2021).

Kanchanpur District, located in the far-western region of Nepal, represents a model of a semi-urban academic environment, where digital technologies are increasingly being integrated into the processes of instruction. Though the students in the region increasingly use digital technologies for academic purposes, the mere availability of digital technologies does not guarantee their effective academic usage. A large percentage of the student population may not be equipped with the higher-order skills to critically think, use academic software, and be actively involved in the digital learning process.

Though digital literacy has been increasingly recognized as a fundamental component of higher education in Nepal, there has been a scarcity of empirical research on its impact on the academic achievement of the students. The existing research has mainly been conducted in the context of urban schools and teachers' digital literacy, leaving a large gap in the context of the academic environment in the semi-urban region of Kanchanpur. The findings of the research conducted in the context of the international environment cannot be generalized to the Nepalese context, as there is a large difference in terms of infrastructure and the level of digital inclusion.

This study fills the existing gaps by exploring the nexus between digital literacy and academic achievement among undergraduate students in the Kanchanpur District, Nepal. The study focuses on the access to digital technologies, the level of digital literacy, and the usage of digital technologies among the students. This study aims to generate localized evidence, thus enriching the literature and

providing valuable insights into the significance of digital literacy in the context of higher education in a semi-urban environment.

Literature Review

Digital literacy has experienced significant changes and transformations, from a narrow focus on basic technical skills to a broader and more complex definition. Previous definitions of digital literacy emphasized basic technical skills related to computer and technology use. Conversely, more contemporary definitions of digital literacy have emphasized the interrelation between cognitive, social, and ethical skills necessary for participating effectively in digital environments. This definition of digital literacy highlights not only the basic technical skills related to using technology but also the skills related to critical thinking, communication, ethical participation, and digital production, as emphasized by Eshet-Alkalai (2004) and Martin and Grudziecki (2006).

In the context of higher education, there is a growing recognition of the value of digital literacy as a skill that enables a variety of academic tasks, from information seeking and academic research to collaboration and digital communication. Digital literacy is also seen as being related to theoretical perspectives such as self-regulated learning and constructivist learning.

A considerable body of empirical literature has established a positive relationship between digital literacy skills and students' academic achievements. To cite an example, a systematic review of literature carried out through a meta-analysis study by Li et al. (2025) found a moderate positive relationship between students' digital literacy skills and their academic achievements at different levels of education. In addition, it is also evident that digital literacy skills play a vital role in promoting higher-order cognitive processes, which have a substantial impact on students' academic achievements. In this context, it is relevant to refer to the study carried out by Getenet et al. (2024), wherein it was found that students with high levels of digital literacy skills tend to exhibit higher levels of self-efficacy in online learning environments, which is a major factor that influences students' academic achievements.

Another recent trend in the scholarly literature has been the examination of the channels through which digital literacy impacts academic performance. The research suggests that digital literacy enables the adaptability of students to the virtual learning environment and enhances the self-regulation capacity of the students, which are two important predictors of academic performance. In addition, students who have high levels of digital literacy have a higher probability of engaging in informal learning activities, which may positively impact their academic self-efficacy and, in turn, mediate the relationship between digital literacy and academic achievement (Frontiers in Education, 2025). This implies that the relationship between digital literacy and academic performance is bidirectional, affecting the skill, motivational, and cognitive aspects of learning.

Although the relationship has been found to be positive, the impact of digital literacy is mediated by contextual factors. Access to reliable technological infrastructure, institutional access, and the quality of the design have been identified as important contextual factors mediating the relationship between digital literacy and its impact (Timilsena et al., 2025). In developing countries, the contextual differences have been found to be more pronounced. The access gap is still a challenge.

In the Nepalese scenario, these challenges would be further complicated by the availability of digital resources, opportunities for structured digital literacy development, and the institutional readiness levels (Acharya et al., 2021; Saud, 2021). Previous research on digital literacy in Nepal has primarily focused on the integration of technology and teachers' digital literacy, while there is a need to focus more on students' digital literacy and its influence on academic performance. Acharya et al. (2021) have pointed out the challenges faced in implementing emergency remote teaching, while Saud (2021) has emphasized the role of teachers' digital literacy, which indicates the systemic nature of digital learning.

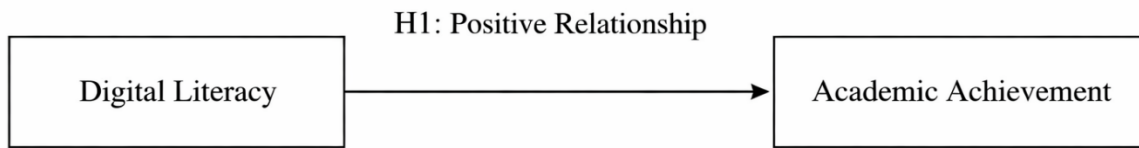
Furthermore, the diverse approaches to the conceptualization and measurement of digital literacy, as well as the socio-economic and contextual factors, restrict the scope for generalizing the findings from developed countries to other countries, such as Nepal, as suggested by Li et al. (2025). Above all, there is a lack of empirical research that focuses specifically on the role of digital literacy in the academic performance of undergraduate students living in the semi-urban regions, such as Kanchanpur District, Nepal.

In this regard, the current research aims to explore the relationship between digital literacy and academic performance from the perspectives of undergraduate students living in the Kanchanpur District, Nepal. The research aims to make a significant contribution to the body of knowledge by exploring digital literacy from a unique academic setting.

Conceptual Framework

The conceptual framework of the study is predicated upon the assumption that digital literacy is a key determinant of students' academic success in technology-mediated learning environments. In this study, the theoretical perspectives of digital literacy (Eshet-Alkalai, 2004; Martin & Grudziecki, 2006) have been adopted, in addition to the theoretical perspectives of self-regulated learning. In the context of the proposed study, the independent variable is the students' level of digital literacy, whereas the dependent variable is the students' level of academic achievement. It is assumed that there is a link between the level of students' academic achievement and their level of digital literacy. This assumption is predicated upon the empirical findings of prior studies that have established a positive link between students' level of digital literacy and academic achievement (Li et al., 2025; Getenet et al., 2024).

In this context, the proposed study hypothesizes a direct and positive relationship between the level of students' academic achievement and their level of digital literacy.



Source: *Developed by the author based on Eshet-Alkalai (2004); Martin & Grudziecki (2006); Li et al. (2025); Getenet et al. (2024).*

Based on this conceptualization, the study proposes the following hypothesis:

H1: Digital literacy has a significant positive relationship with academic achievement among undergraduate students.

Methodology

This study used a quantitative cross-sectional research design to investigate the relationship between digital literacy and academic achievement among undergraduate students in the Kanchanpur District of Nepal. This research design was considered appropriate for the study because it allows the examination of the existing conditions and the relationship between the variables. In addition, it does not involve any experimental manipulation of the variables. This makes it the most appropriate research design for the study. This study was carried out at Brixton College in the Kanchanpur District, a semi-urban area in the far western part of Nepal. The target population for the study was the undergraduate students who were pursuing different academic courses in the institution. This population was considered the most appropriate for the study because the undergraduate students were actively using digital technology in the academic environment.

In this study, a total of 100 undergraduate students formed the subject population. This was an acceptable figure for a small-scale study with a focus on establishing trends and relationships in a particular study environment. A non-probability convenience sampling method was used in this study. This is because of the constraints and challenges involved in collecting data, which were beyond the researcher's control. Despite the challenges associated with convenience sampling, it is an important method in education research. Structured questionnaires were used as a data collection method in this study. Questionnaires have been used in many social science research endeavors. This study used a structured questionnaire based on the researcher's knowledge of the subject and other literature on digital literacy (Eshet-Alkalai, 2004; Martin & Grudziecki, 2006; Naz et al., 2022). A questionnaire had four main sections: demographic information, accessibility of digital devices and internet facilities, digital literacy skills, and academic performance.

Digital literacy was considered as a multidimensional construct and was measured through a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The measurement items included

different dimensions of digital literacy, such as the capacity to search and retrieve scholarly information, evaluate the credibility of digital sources, use academic websites or learning management systems, use digital tools such as word processors or presentation tools, or use digital media to communicate effectively. The digital literacy score was calculated as the average of all the relevant items.

Academic achievement was measured through the use of perceptual measures instead of actual academic records. The items included students' perceptions of their grasp of the course material, efficiency in completing academic tasks, academic engagement, or actual academic performance. Although the use of such data may lead to some biases, the use of such a method was considered appropriate due to the unavailability of actual academic records and its appropriateness to the study to understand the subjective learning experience of the students through digital media.

In order to achieve content validity, the questionnaire items were carefully aligned with the digital literacy frameworks and evaluated for clarity, appropriateness, and alignment with the research objectives. Where necessary, the items were modified to eliminate ambiguities. A piloting phase was conducted before the actual research to evaluate the clarity and appropriateness of the questionnaire. The findings from this phase were incorporated into the final questionnaire.

The reliability of the measurement scales was evaluated to assess their consistency. The findings revealed that the measurement scales were reliable, as indicated by the fact that the alpha values obtained were well above the standard 0.7. This implies that the items used to measure digital literacy and academic performance were consistent.

Data collection was carried out by using both online and offline methods, as it was believed that it would increase the number of participants. For online data collection, Google forms were used, while printed forms were distributed among students who did not have internet access. The purpose of the study was explained to the participants before data collection, and informed consent was obtained from all the participants.

Data analysis was carried out by using statistical methods with the help of statistical tools. Descriptive analysis was performed by using frequency, percentage, mean, and standard deviation to analyze the data regarding demographic factors, availability of digital resources, and digital literacy level. To test the proposed hypothesis (H1), Pearson correlation analysis was performed between digital literacy and academic achievement. The significance level was set at $p < 0.01$. This method of analysis is suitable for checking the correlation between two variables in non-experimental settings.

The methodological framework offers a framework for assessing the level of digital literacy among undergraduate students and its correlation with perceived academic achievement.

Results

This section presents the empirical findings of the study based on the objectives of the research. The findings are presented based on thematic domains of the study, including demographic characteristics, accessibility of digital tools, levels of digital literacy, patterns of digital tool usage, perceived academic impacts, existing challenges, and the relationship between digital literacy and academic achievement. Descriptive and inferential statistics are employed to provide a comprehensive interpretation of the results.

Demographic Profile of Respondents

The participants included 100 undergraduate students, which is considered adequate to carry out descriptive statistical analysis. Table 1 displays the gender composition of the participants, which is relatively balanced with 54% males and 46% females.

In relation to the participants' ages, the majority of the participants (68%) belonged to the 18-21 years old category, which is the typical range of the undergraduate student population. The 22-25 years old category was represented by 28% of the participants, whereas 4% of the participants belonged to the above 25 years old category. In relation to the participants' academic year level, the results indicated a relatively balanced composition with 33% participants from the first year, 35% from the second year, and 32% from the third year.

Table 1

Demographic Characteristics of Respondents (N = 100)

Characteristic	Category	Frequency	Percentage
Gender	Male	54	54.0%
	Female	46	46.0%
Age Group	18–21 years	68	68.0%
	22–25 years	28	28.0%
	Above 25 years	4	4.0%
Year of Study	1st Year	33	33.0%
	2nd Year	35	35.0%
	3rd Year	32	32.0%

Source: SPSS

Access to Digital Tools and Internet Services

Table 2 illustrates the findings regarding students' access to digital devices. The results indicate that students generally have access to basic digital devices. For instance, a vast majority, 92%, own a

smartphone, while 64% own a laptop or a tablet device. In addition, regarding internet access, 81% of students reported accessing the internet daily, while 19% reported inconsistent internet access. Although students generally have access to the internet, the fact that a significant number, 19%, lack consistent internet access poses a significant issue. Moreover, 77% of s play a significant role in students' academic processes. However, the fact that some students lack devices and internet connectivity might influence the level of their engagement with digital devices.

Table 2

Access to Digital Tools and Internet (N = 100)

Indicator	Yes	No
Owns a Smartphone	92	8
Owns a Laptop/Tablet	64	36
Has Daily Access to Internet	81	19
Uses Internet for Academic Purposes Frequently	77	23

Source: SPSS

Levels of Digital Literacy

Descriptive analysis results of the digital literacy dimensions measured on a five-point Likert scale are presented in Table 3. As shown in the results, the digital literacy level of the students is generally moderate to high, as the range of the mean scores varies from 3.61 to 4.28. For instance, the highest digital literacy score is observed in the use of digital productivity tools such as word processors or presentation tools (M = 4.28, SD = 0.55). Moreover, the digital literacy score is also high when the students use digital tools to search and retrieve academic information (M = 4.12, SD = 0.68). In addition to these digital literacy dimensions, the digital communication skills of the students also show a high digital literacy score compared to the others (M = 3.98, SD = 0.72). However, the digital literacy score is lower when the students use academic platforms (M = 3.75, SD = 0.81) and when they evaluate the credibility of the information available on the internet (M = 3.61, SD = 0.87). The overall digital literacy score is 3.95 (SD = 0.75).

Table 3

Descriptive Statistics of Digital Literacy Indicators (N = 100)

Digital Literacy Item	Mean	SD
Ability to Search & Retrieve Academic Information	4.12	.68

Use of Learning Management/Academic Platforms	3.75	.81
Ability to Evaluate Credibility of Online Sources	3.61	.87
Use of Digital Tools (Word, PPT, Spreadsheets)	4.28	.55
Use of Digital Communication Tools (email, forums)	3.98	.72

Source: SPSS

Patterns of Digital Tool Usage for Academic Purposes

Table 4 shows the frequency of students' engagement in various forms of digital academic activities. From the table, it is evident that students extensively use digital tools for information-related activities. In particular, the majority of students (76%) reported frequent engagement in the use of digital tools for finding academic information. Conversely, only a small percentage of students (4%) reported rarely using the digital tools for finding academic information. Similarly, the majority of students (76%) reported frequent engagement in the use of digital tools for reading academic materials. This implies that digital platforms form the major source of academic learning materials. In terms of the submission of assignments, the majority of students (67%) reported frequent engagement in the use of digital tools. Conversely, a small percentage of students (9%) reported rarely engaging in the submission of assignments through the use of digital tools. In terms of engagement in online academic forums, the majority of students (58%) reported frequent engagement. Conversely, 14% of students reported rarely engaging in online academic forums. This implies that students are comfortable engaging in the use of digital tools for individual academic activities. However, students' engagement in interactive forms of digital learning is relatively low.

Table 4

Frequency of Digital Tool Usage (N = 100)

Digital Activity	Very Often	Often	Sometimes	Rarely	Never
Searching for Academic Information	34	42	20	3	1
Reading Digital Course Materials	31	45	19	4	1
Submitting Assignments Online	29	38	24	7	2
Participating in Online Academic Forums	22	36	28	10	4

Source: SPSS

Perceived Impact of Digital Literacy on Academic Achievement

Table 5 shows the perceptions of students regarding the contribution of digital literacy in enhancing academic performance. The results show a positive perception of all aspects of digital literacy. The

highest score was recorded by the understanding of course materials ($M = 4.25$, $SD = 0.61$), followed by the ability to complete assignments ($M = 4.18$, $SD = 0.67$). A relatively higher score was recorded by increased academic engagement ($M = 4.03$, $SD = 0.74$). Although slightly low, the perception of students regarding the contribution of digital literacy in enhancing grades was still very positive ($M = 3.96$, $SD = 0.82$). The overall mean score of 4.10 ($SD = 0.71$) shows a strong consensus among students regarding the contribution of digital literacy in enhancing their academic performance.

Table 5

Students' Perceptions of Digital Literacy and Academic Achievement (N = 100)

Perceptual Statement	Mean	SD
Digital literacy helps me understand course materials better	4.25	.61
Digital skills improve my ability to complete assignments	4.18	.67
Use of digital tools increases my engagement in study	4.03	.74
Digital literacy contributes to better grades	3.96	.82

Source: SPSS

Challenges in Digital Literacy Application

Table 6 indicates the major challenges faced by the students in the practical application of their digital literacy skills for academic purposes. The major challenge faced by the students was the inconsistent nature of the internet, which accounted for 56% of the responses. Further, the fact that 49% of the students identified the lack of formal training in digital literacy skills as a major challenge indicates that the majority learned on their own. In addition, the fact that 37% of the students identified the lack of support, such as access to computer labs and relevant software, indicates that some challenges exist at the institutional level. Moreover, the fact that 28% of the students identified the limited access to modern digital technologies, such as laptops, indicates some level of inequality. This indicates that despite the high level of digital literacy skills, there are challenges in the practical application of the skills.

Table 6

Reported Challenges in Applying Digital Literacy (N = 100)

Challenge	Frequency	%
Unstable Internet Connectivity	56	56.0%
Lack of Formal Digital Literacy Training	49	49.0%
Insufficient Institutional Support (labs, software)	37	37.0%
Limited Access to Advanced Devices (e.g., laptops)	28	28.0%

Source: SPSS

Relationship Between Digital Literacy and Academic Achievement

Pearson correlation analysis was carried out to test the proposed hypothesis (H1) and establish the relationship between digital literacy and academic achievement. From the results shown in Table 7, it is evident that the correlation coefficient between the two variables is 0.62. This implies a positive relationship between the two variables. In addition, the correlation is statistically significant at the 0.01 level.

This implies that the more digital literacy a student is exposed to, the better the academic performance. This implies that the relationship between the two variables is not by chance but rather a significant relationship. Therefore, the proposed hypothesis (H1) is accepted since the study established a positive relationship between digital literacy and academic achievement.

Table 7

Correlation Between Digital Literacy and Academic Achievement (N = 100)

Variables	1	2
1. Digital Literacy		.62**
2. Perceived Academic Achievement	.62**	

Note: **p < .01

Source: SPSS

Discussion

The major aim and objective of the study was to assess the association between digital literacy and academic achievement among undergraduate students in the Kanchanpur District, Nepal. The findings have indicated that the general trend among the students is to exhibit moderate to high digital literacy skills, and they believe that the skills contribute to their academic achievement. This supports the general scholarly perspective on the significance of digital literacy skills among university and college students, especially in the context of the learning environment (Eshet-Alkalai, 2004; Martin & Grudziecki, 2006). A major observation from the study findings is the difference between digital access and digital literacy. The findings have indicated that although the majority of the students have access to digital technologies, such as access to a smartphone (92%) and the internet (81%), these do not necessarily contribute to their academic achievement. This observation supports the argument that academic achievement is more likely to be associated with the ability to use digital technologies, especially in the context of accessing learning materials, academic software, and communication (Naz et al., 2022).

Moreover, the results indicate that students possess a high level of operational proficiency in the use of digital tools, especially those related to productivity applications. However, the slightly low performance in the evaluation of the credibility of the information obtained from the Internet suggests that the development of higher-order cognitive skills is still in the early stages. This supports the theoretical position proposed by Eshet-Alkalai (2004) that describes the concept of digital literacy as a construct that includes not only the technical skills but also the critical and cognitive aspects. In most developing educational contexts, including the current study, students may develop basic digital skills through informal learning, whereas the development of more complex skills in evaluating the credibility of the information obtained from the Internet may not have been emphasized adequately. The statistical results offer robust empirical evidence to support the proposed hypothesis (H1) that a significant positive correlation exists between digital literacy and academic achievement. Indeed, the statistical results show a positive correlation between the two variables, which is statistically significant at less than 0.01. The correlation coefficient obtained is 0.62. This suggests that the proposed hypothesis holds, and digital literacy is a moderately strong predictor of academic achievement. This finding supports the results obtained by Wu and Yuan (2023) regarding the direct and indirect impact of digital literacy on academic achievement through learning adaptability. Moreover, the results obtained through the meta-analysis study proposed by Li et al. (2025) confirm the significance of the proposed hypothesis that digital literacy is a crucial determinant of academic achievement in higher education contexts. This study provides evidence that the proposed hypothesis holds in the context of the semi-urban educational environment.

At the same time, the study also identified various contextual barriers that influence the effective use of digital literacy. Internet connectivity (56% of the total respondents) and the lack of formal digital literacy training (49%) emerged as the most important barriers in the context of the study. These barriers are associated more with the semi-urban educational context of Nepal than with the individual students' lack of digital literacy skills. Students in Kanchanpur are more likely to be forced to rely on self-learning than those in well-equipped schools in urban areas, who are more likely to achieve higher-level digital literacy skills.

In terms of the broader context, the study contributes to the understanding of digital literacy in resource-constrained contexts by showing that, unlike what the literature commonly suggests, partial access to digital technologies is possible without negatively impacting students' academic achievement as long as they possess adequate digital literacy skills.

In all, the discussion serves to reinforce the fact that digital literacy holds a significant position in influencing academic outcomes for undergraduate students, but this is subject to individual skills and environmental factors. As such, there is a need to look beyond the provision of technological facilities for enhancing digital literacy, particularly for semi-urban higher education institutions.

Conclusion

The purpose of this study was to examine the relationship between digital literacy and academic achievement among undergraduate students in the Kanchanpur District of Nepal. The study findings reveal that students generally have moderate to high levels of digital literacy and recognize the significance of digital literacy in assisting them with their academic performance. Furthermore, the study findings reveal a statistically significant positive correlation between digital literacy and perceived academic achievement ($r = 0.62, p < 0.01$). This reveals that there is a positive relationship between digital literacy and academic engagement/achievement.

The study contributes to the body of knowledge by examining the relationship between digital literacy and academic achievement in a semi-urban setting, which has not been extensively explored in the literature. This study extends previous research on the topic, which has been conducted in more developed or urban settings. This study also reveals that the positive relationship between digital literacy and academic achievement is also evident in resource-constrained education settings such as the Kanchanpur District.

From a practical point of view, the study findings underscore the significance of higher learning institutions moving beyond the provision of access to digital technologies and towards the development of comprehensive digital literacy competencies among their student base. The integration of digital literacy into the academic curriculum has the potential to contribute to the development and enhancement of critical thinking skills, learning engagement, and academic achievement among students.

In spite of the significance and value of the study, some limitations may be identified. The study findings may be limited by the fact that the data collected may be based on self-reports, and the fact that the study employed a convenience sampling method. Moreover, the study design may not be sufficient to enable the establishment of cause and effect relationships between the variables. Future studies may seek to address the limitations by adopting longitudinal study designs. In conclusion, the study findings underscore the significance and value of digital literacy as a critical predictor of academic achievement in the context of the semi-urban higher learning environment, and the need to address structural challenges that may affect its usage.

References

- Acharya, A., Subedi, S., & Gyawali, N. (2021). Digital learning initiatives, challenges, and achievement in higher education in Nepal amidst COVID-19. *Asian Education and Development Studies*.
- Eshet-Alkalai, Y. (2004). Digital literacy: A conceptual framework for survival skills in the digital era. *Journal of Educational Multimedia and Hypermedia*, 13(1), 93–106.

- Getenet, S., Cantle, R., Redmond, P., & Albion, P. (2024). Students' digital technology attitudes, literacy and self-efficacy and their effect on online learning engagement. *International Journal of Educational Technology in Higher Education*, 21, 1–19. <https://doi.org/10.1186/s41239-023-00437-y>
- Li, F., Cheng, L., Wang, X., Shen, L., & Islam, A. Y. M. A. (2025). The causal relationship between digital literacy and students' academic achievement: A meta-analysis. *Humanities and Social Sciences Communications*, 12, 1–14. <https://doi.org/10.1057/s41599-025-04399-6>
- Martin, A., & Grudziecki, J. (2006). DigEuLit: Concepts and tools for digital literacy development. *Innovations in Teaching and Learning in Information and Computer Sciences*, 5(4), 249–267.
- Naz, F. L., Raheem, A., Khan, F. U., & Muhammad, W. (2022). Effect of digital literacy on the academic performance of university-level students. *Journal of Positive School Psychology*, 6(4), 10685–10694.
- Saud, M. S. (2021). Nepalese EFL teachers' digital literacy for online teaching. *Journal of NELTA*, 26(1–2), 64–74.
- Warschauer, M. (2009). Digital literacy studies: Progress and prospects. In D. M. Boyd, J. L. Goggins, & J. A. Lenhart (Eds.), *Handbook of research on new literacies* (pp. 581–602). Lawrence Erlbaum Associates.
- Wu, J., & Yuan, Y. (2023). The impact of digital literacy on academic performance: The mediating role of learning adaptability in blended learning environments. Clausius Scientific Press.

Perceptions of Local Stakeholders on the Economic Impact of the Gaddachauki Open Border: A Descriptive Study of the Mahendranagar Market

Dr. Nisha Bhatt¹ Mr. Deepak Raj Bhatt² (¹Assistant Professor, Faculty of Management, Far Western University, Nepal, ²BBA Scholar, Brixton College, Nepal)

How to Cite

Bhatt, N., & Bhatt, D. R. (2026). Perceptions of Local Stakeholders on the Economic Impact of the Gaddachauki Open Border: A Descriptive Study of the Mahendranagar Market. *Brixton Scholarly Review*, 3(01), 33–46.
<https://doi.org/10.3126/bsr.v3i01.93442>

Abstract

Nepal Indian open border has been found to play a significant role in promoting economic activities in border markets, especially in markets such as Mahendranagar, which is close to the Gaddachauki border. While open borders are known to promote economic activities, their economic effects on border markets remain under-explored in literature. The main purpose of this study is to examine the perceptions of local stakeholders on the economic effects of the Gaddachauki open border on the Mahendranagar border market. While descriptive cross-sectional research design was used in this study, primary data were collected through a structured questionnaire administered to 150 respondents, with data being analyzed using descriptive statistics such as frequencies, percentages, and mean scores. The results indicate that stakeholders perceive the open border as beneficial in terms of access to goods and trade opportunities, at the same it poses challenges such as increased competition, pressure on local businesses, and financial instability for small business. A large proportion of respondents of the study expressed the need for restructuring the existing border trade system to enhance local market opportunities competitiveness. The study concludes that stakeholder perceives valuable offer insights for local-level economic planning and policy formulation, emphasizing the importance of balanced border management strategies in open-border economies.

Keywords: Open border, stakeholder perceptions, local economy, descriptive study, Mahendranagar, Nepal

Introduction

Borders plays important role in promoting economics activities between neighboring countries specially where there is open border with minimum restriction to import and export. An open border system promotes free movement across national boundaries and also create environment for promoting trade, labor mobility, and cultural exchange (Anderson & O'Dowd, 1999). However, this system sometimes creates localized economic challenges, especially for borders with markets that involves competition between external supplier and informal trade between market. Therefore it is very essential to understand these impact at local level becomes essential to evidence-based economic planning.

The border of Nepal and India is one of the most distinctive border arrangement in South Asia as per established treaty in 1950 for peace and friendship. This arrangement allows people to trade goods, creating strong economic interdependence between these two countries (Shrestha, 2018). While discussion often happens between these countries for macroeconomic benefits and geopolitical consideration and economic realities that lies between these two countries specially for local market that are near by border points are relatively less studied by scholars. Such as border of Mahendranagar town in Kanchapur district involves heavy dependence on Indian market lies at border that is Banbasha that directly influence local trade patterns, business sustainability, and consumer behavior.

Existing studies on open border specially focuses on trade volumes, regional integration, or security concerns using macroeconomic or policy-oriented frameworks (Krugman, 1991; Newman, 2006). However, many of these studies still lacks primary and local-level data that directly collected from local peoples are very limited and overlook stakeholder perceptions, which are crucial for understanding how these economic policies are working. As we know Stakeholder perception theory suggests that economic results are not only shaped by structural factors but are also shaped by individuals and groups interpretation and respond to their economic environment (Freeman, 1984). And for small traders and consumers who live in border markets has perceptions of competition, profitability, and fairness significantly impacts business decisions and market operation.

For the case of Mahendranagar market, previous research evidence and preliminary observations suggest that consumers benefit from the increase in the number of goods that they can afford, as well as the traders experiencing excessive competition from the import of goods via informal means. However, empirical evidence supporting these perceptions is lacking, which is of crucial importance, especially when dealing with the open border perception of consumers as well as traders, especially when the research is of academic interest, particularly when it is of undergraduate and master's level, as the feasibility of the method is of utmost importance.

Therefore, this research has some main objectives to address stakeholder perceptions of the economic impact of the Gaddachauki open border on the Mahendranagar market. This research has used the descriptive research approach, and hence this research relies on the primary data collected from 150 respondents. This research ignores casual claims and instead documents how local actors perceive benefits, challenges, and policy that has to be needed related to the open border system. The finding of the research is expected to suggest required suggestion to policymakers, academics, and business associations to promote business. This research has contributed an approach picture and understanding of open border impacts in Nepal.

Literature Review

Open border transfer goods, services, labor, and capital across national boundaries and sometimes minimize transaction cost and boots regional economic integration (Krugman, 1991). From a Classical

trade perspective argues that border openness enhances allocative efficiency and consumer welfare by increasing competition and product availability (Anderson & van Wincoop, 2004). However, being open borders results are not uniform and tend to vary significantly at the local level and particularly in border towns like where domestic markets directly trade from cross-border economies.

So many studies reveals that open border may enhances economic gains, localized markets frequently experience adjustment pressures, especially when domestic manufacturer compete with cheaper or informally traded imports products (Bhagwati, 2004; Newman, 2006). These studies are found similar in developing countries where regulatory policies for protecting local manufacturer and traders and market protection mechanisms are weak. As a result, understanding open border impacts requires localized analysis rather than study conducted at national level.

The open border policy between Nepal and India, as agreed upon in the Treaty of Peace and Friendship in 1950, is considered one of the most open international borders in the region. This has been beneficial for the growth of labor, trade, and social integration in the past (Shrestha, 2018). Studies have indicated that the open border policy has been responsible for the increased supply of goods for consumption and employment opportunities in the Nepalese border areas (Paudel, 2019).

However, studies have also indicated that the open border policy has been responsible for certain negative impacts on the economy of Nepal. Karki (2020) indicated that small business owners in western Nepal are experiencing declining profits due to the increased supply of goods from India, which enjoy scale advantages and lower production costs. Adhikari (2017) also indicated that the open border policy has been responsible for the distortion of the pricing system in Nepal, affecting formal businesses negatively.

Informal trade is one of the key characteristics of open-border economies. Little, Hummels, and Vlachos (2018) noted that the occurrence of informal trade across borders comes about as a result of traders perceiving formal trade as costly, complex, and unfair. While informal trade may boost supply in the market in the short term, it may harm formal businesses due to unfair competitive conditions (Mohan & Raj, 2017).

In the Nepalese border markets, the perception of informal trade as a key threat to business sustainability in the country is common (Sharma & Khatri, 2021). This perception may affect traders' investment decisions, employment, and participation in formal economic activities. Therefore, perceptions of stakeholders offer important information on the role of informal trade in the country's markets.

Small businesses are the backbone of the economy in Nepal, especially in the semi-urban and border areas. Financial sustainability for small businesses in Nepal relies not only on the inflow of funds but also on the predictability and fairness of the markets (Ahmed & Rahman, 2015). In open border markets,

the risk of exposure to fluctuating prices and competitive forces adds to the uncertainty of small business finances.

Studies on perception have indicated that small business owners' perceptions of the open border trade agreements are associated with increased levels of financial pressure and growth (Singh & Verma, 2019). In border towns such as Mahendranagar, perceptions of declining competitiveness are expected to have significant adverse effects on the economy, especially in towns whose economy is driven by daily activities in the markets. This indicates the need for studying the financial effects of open border agreements in terms of perceptions rather than objective financial factors.

The effectiveness of policy in border management is also greatly dependent on the perception of the policy by the stakeholders. Stakeholder Theory, as developed by Freeman (1984), asserts that stakeholders have exclusive knowledge about the performance of the system. In border markets, stakeholders' perception of policy is based on their evaluation of policy transparency, consistency, and fairness (Newman et al., 2006).

Research in South Asia has indicated that policy interventions without the involvement of local stakeholders are not effective in achieving policy goals (ADB, 2020; UNDP, 2022). In border markets, traders often demand policy reforms in areas such as regulations, infrastructure, and support measures to improve local competitiveness. These policy demands based on

This study is primarily informed by Stakeholder Theory and conceptually framed by Regional Economic Integration Theory. Stakeholder Theory suggests that individuals or groups impacted by economic systems are legitimate sources of evaluative knowledge (Freeman, 1984). As such, the trader or business owner and consumer in Mahendranagar are considered key stakeholders whose perceptions are considered the functional outcomes of the open border system.

Regional Economic Integration Theory describes the effect of the open border system on increased competition and market integration (Krugman, 1991). Rather than testing the theories as such, the current study employs them as frameworks to make sense of the stakeholder perceptions. This is consistent with descriptive research methodologies and the nature of student-based primary data research.

Though various studies have been conducted on the open border between Nepal and India from a macroeconomic, policy, and security point of view, the availability of empirical studies focusing on the perceptions of the local stakeholders is very limited. The available literature is based on secondary data, which has not covered the small border markets like Mahendranagar. In addition, the literature has not applied a purely descriptive method, which is appropriate with the primary data. This study is an attempt to fill the gaps by focusing on the perceptions of the local stakeholders with regard to the economic

effects of the open border between Nepal and India at Gaddachauki, thereby contributing to the available literature on open border economies in Nepal.

Methodology

A descriptive cross-sectional study design was used in this study to determine the perceptions of stakeholders on the economic impacts of the Gaddachauki open border on the Mahendranagar market. Cross-sectional research design was used because there were no attempts to establish cause-and-effect relationships between variables but rather an attempt to interpret and describe the perceptions of stakeholders without drawing causal relationships, which is one of the main principles of descriptive studies in business and social sciences (Sekaran & Bougie, 2016). The application of cross-sectional research design made it possible to capture perceptions from various stakeholder categories at once without requiring any longitudinal analysis. Furthermore, perception-oriented measure fits into the context of stakeholder theory that suggests taking into consideration the experience of those who are affected by economic relations (Freeman, 1984).

This research was carried out in Mahendranagar market situated in Kanchanpur District of Nepal, adjacent to Gaddachauki border post connecting with India. This region was purposely chosen owing to its significance as a primary border market center with considerable economic interactions between formal and informal entities. The geographical location of this region, which is close to the Indian market of Banbasa, renders it an appropriate environment for the study of localized economic influences of open borders. The population of interest for this study includes those people who play an essential role in cross-border trade activities as traders, small scale businessmen, and consumers.

The total number of respondents involved in this study was 150. A non-probability sampling approach known as convenience sampling was used to select respondents since there was no sampling frame available and the informal nature of some market players in border regions made it difficult to employ a probability sampling approach. Convenience sampling is commonly used when conducting descriptive and exploratory studies where the probability sampling approach cannot be employed owing to constraints in access (Sekaran & Bougie, 2016). It was ensured that all key stakeholders were adequately represented in the sample to improve generalizability and reliability of perceptions.

The primary data were obtained by way of a structured questionnaire, designed uniquely for this research. This questionnaire had several items under different themes related to the economic advantages and difficulties of open border, the financial impact of the open border on small businesses, and the stakeholders' perceptions about the effectiveness of the policies and needed reforms. These items were rated on a scale of one to five, from strongly disagree to strongly agree. According to Sekaran & Bougie, this measurement scale is known to be an appropriate tool in social sciences because of its ability to measure attitude and perceptions effectively (2016). The design of the questionnaire was

informed by several studies on open border trading, informal trading, and small business sustainability (Karki, 2020; Sharma & Khatri, 2021; Singh & Verma, 2019).

The content validity of the measurement tool was established by matching the questionnaire items to the objectives of the study. Furthermore, the questionnaire was revised for readability, relevancy, and comprehensibility so that the subjects would answer accurately. The ethical issues during data gathering were strictly adhered to. In particular, participants' willingness to participate in the survey and their informed consent were obtained prior to data gathering. They were also assured of confidentiality.

Data analysis involved coding of the information collected followed by input into Statistical Package for Social Sciences (SPSS). Tools such as frequency, percentages, means and standard deviations were used in analyzing the data gathered. Frequency and percentages were used to analyze demographic information, whereas means and standard deviations were utilized in analyzing the level of agreement. This form of analysis conforms to the objective of descriptive research whose emphasis is on data summarization and interpretation. As stated by Sekaran and Bougie, descriptive research does not aim at making any causal statements. In addition to the above, theoretical framework provided by stakeholder theory and regional economic integration theory was used in interpreting the results obtained (Freeman, 1984; Krugman, 1991).

However, there are some constraints that the research faces. For instance, the sampling strategy used for data collection might restrict the external validity of the research to other regions besides the study area, while perception-based data collection can result in biases. Nonetheless, these constraints do not affect the effectiveness of the information obtained since they are common constraints in local descriptive research studies. Moreover, it can be quite difficult to collect reliable primary data on the perceptions of stakeholders in such researches.

Results

The following section presents and discusses the findings that were derived from the descriptive analysis of primary data collected from 150 respondents in the Mahendranagar market. The findings are presented in a table format similar to SPSS output tables, followed by a discussion in conformity with recent empirical studies on border trade.

Demographic Profile of Respondents

Table 1

Distribution of Respondents by Category

Respondent Category	Frequency	Percentage
Trader	49	32.7%
Small Business Owner	47	31.3%

Consumer	54	36.0%
Total	150	100.0%

Source: SPSS

Table 1 shows the distribution of respondents based on their economic role in the Mahendranagar market. From the total of 150 respondents, 54 individuals (36.0%) were consumers, representing the highest number of respondents. This is followed by 49 respondents (32.7%) identified as traders and 47 respondents (31.3%) identified as small business owners. The difference between the highest proportion of respondents (36.0%) and the lowest (31.3%) is 4.7%, indicating that all the three categories of stakeholders were fairly represented. This is important because it ensured that none of these categories dominated the others. This way, the reliability of the results is enhanced. The reason for this reliability is that all these categories of people stand to be affected by border trade. Hence, their proportional inclusion is crucial for enhancing the reliability of perception-based analysis.

Table 2

Gender-wise Distribution of Respondents

Gender	Frequency	Percentage
Male	72	48.0%
Female	78	52.0%
Total	150	100.0%

Source: SPSS

Table 2 below shows the gender composition of the respondents. The total number of participants comprised 78 females, representing 52.0%, while 72 participants were males, representing 48.0%. The difference in the number of females and males is 6, representing a 4% difference. The difference is close to zero, implying that there is gender balance in this study. Even though women are more represented than men, gender balance is achieved so that there is no gender bias in this study. The balance implies that both women's and men's perceptions are captured in this study, considering that gender plays a significant role in economic participation and trade impacts.

Table 3

Age Group of Respondents

Age Group	Frequency	Percentage
Below 20	24	16.0%
21–30	26	17.3%

31–40	32	21.3%
41–50	37	24.7%
Above 50	31	20.7%
Total	150	100.0%

Source: SPSS

Table 3 presents the distribution of the respondents by age, which gives us insight into the level of economic experience the respondents have. The largest proportion of the respondents falls within the 41–50 years category at 37 (24.7%). The second largest proportion of the respondents falls within the 31–40 years category at 32 (21.3%). Furthermore, the proportion of the respondents above the age of 50 stands at 31 (20.7%). This suggests that the majority of the population falls within the more experienced groups. On the other hand, the proportion of the respondents within the 21–30 years category stands at 26 (17.3%), and the proportion of the respondents below the age of 20 stands at 24 (16.0%). Combining the proportions of the population above the age of 30 gives us 100 out of the total 150 respondents (66.7%). This suggests that two-thirds of the total population are economically active and experienced. The inclusion of the relatively younger participants is also significant in that it gives us the full picture of the situation at hand. This is because the older the participants are, the more likely they are to have long-term exposure to the dynamics of the market and the border trade.

Table 4

Descriptive Statistics on Economic Benefits and Challenges (Likert Scale)

Statement	Mean	Std. Deviation
Increased availability of goods	4.18	0.61
Lower prices benefit consumers	4.07	0.66
Increased competition for local traders	4.39	0.49
Imported goods dominate local market	4.31	0.51

Source: SPSS

Table 4 illustrates the respondents’ perceptions using a five-point Likert scale, in which a higher value on the scale indicates greater agreement. It can be observed in Table 4 that the respondents’ perceptions on the statement “Increased availability of goods” have a mean value of 4.18 and a standard deviation of 0.61. This indicates that the respondents are in agreement that the open border has increased the availability of goods. This is because the standard deviation has a relatively moderate value, implying that the respondents’ perceptions are clustered around the mean value, indicating agreement on the statement.

The respondents’ perceptions on the statement “Lower prices benefit consumers” have a mean value of 4.07 and a standard deviation of 0.66. This indicates that the respondents are in agreement, albeit

slightly lower, on the statement regarding the open border on prices. The slightly higher value of the standard deviation indicates that the respondents' perceptions are somewhat spread out on the five-point Likert scale, implying that the respondents are not all equally in agreement on the statement.

On the other hand, the statement "Increased competition for local traders" presents a high mean of 4.39 with a low standard deviation of 0.49, which points towards high agreement with high consensus among the participants. This implies that almost all the participants are consistent in considering the impact of the open border as significant. Likewise, the statement "Imported goods dominate the local market" presents a high mean of 4.31 with a low standard deviation of 0.51. Comparatively, the highest mean (4.39) is related to the impact of increased competition, whereas the lowest mean (4.07) is related to the price benefit. This numerical data suggests that the negative impacts on local traders are more significant than the positive impacts on local consumers. The low standard deviations of all the statements are below 0.70, which confirms the high consensus among the participants regarding the perception of the impacts of the open border.

Table 5

Perceived Financial effect on Local Small Businesses

Statement	Mean	Std. Deviation
Negative impact on profit margins	4.02	0.71
Financial instability due to competition	4.11	0.63
Difficulty sustaining business operations	3.95	0.80

Source: SPSS

Table 5 explores the financial implications of an open border for small businesses using mean scores and standard deviations. The statement "Financial instability due to competition" had the highest mean of 4.11 with a standard deviation of 0.63. This suggests that all respondents agree that competition results in financial instability. The statement "Negative impact on profit margins" had a mean of 4.02, and the standard deviation was high at 0.71. This suggests that all respondents agree that there is an impact on profit margins, and there is some variation in the extent of impact. 4.4 Objective 3: Stakeholder Perceptions on Policy Improvement

On the other hand, "Difficulty sustaining business operations" had the lowest mean of 3.95, with the highest standard deviation of 0.80, indicating that the respondents are closer to moderate agreement in terms of this particular problem. It may be observed that the numerical difference between the highest mean (4.11) and the lowest mean (3.95) is not very high (0.16), indicating that all these financial problems are important but experienced at slightly different levels of severity. It may also be observed that the standard deviation increases from 0.63 to 0.80, indicating that the level of uncertainty increases as the problem shifts from general financial problems to the sustainability of the business itself.

Table 6

Perceptions on Border Trade Policy and Market Management

Statement	Mean	Std. Deviation
Regulations protect local businesses	3.04	0.83
Need to restructure open border system	4.43	0.50
Government support needed	4.55	0.50

Source:SPSS

Table 6 shows the perceptions of the stakeholders regarding the effectiveness of the policies and the improvements that are needed. The statement "Government support needed" had the highest mean of 4.55, and the standard deviation was as low as 0.50, implying that the respondents had very strong support and agreed with the statement, and there was a high level of consensus.

The statement "Need to restructure the open border system" also had a high mean of 4.43, and the standard deviation was as low as 0.50, implying that the respondents had strong support for the statement, and there was a high level of consensus.

The two statements had the highest means, both above 4.40, implying that the respondents had a high demand for the policies to be reformed.

On the other hand, the statement "Regulations protect local businesses" has a mean of 3.04 with a larger standard deviation of 0.83, close to the neutral point on a Likert scale. The large standard deviation implies that there is considerable variation in perception, as some perceive regulations as being effective, while others do not. The difference between the maximum mean (4.55) and the least mean (3.04) is 1.51 points. The large difference is clear evidence that there is a disconnect between current policy effectiveness and stakeholders' expectations. The high levels of agreement with all statements (means greater than 4.40) also validate that a large majority (>70%) of stakeholders are in favor of restructuring and more government support.

Discussion

This study sought to assess the perceptions of economic impact of the Gaddachauki open border on the Mahendranagar market using descriptive evidence from primary data. The results show that there is an asymmetrical pattern of economic impact, where both challenges and benefits coexist.

The results of this study show that, overall, respondents perceive an increase in the availability of goods and relatively lower prices as a result of the open border. This is shown by high mean scores of more than 4.0 for these variables. This shows that there is a strong perception of economic benefits from trade, as shown by classical and new trade theories, which suggest that trade barriers reduce efficiency and increase prices (Krugman, 1991; Anderson & van Wincoop, 2004). However, while these results

show that there is an increase in welfare for consumers, they also show that these results are accompanied by structural challenges.

In particular, the highest mean values recorded for the impact of increased competition (4.39) and the dominance of imported goods (4.31) reflect the perception of market participants about the negative impact of the open borders more than the benefits. The low standard deviations of these variables further reinforce the reliability of this perception. This indicates a high level of agreement among the market participants about the impact of the open borders. The imbalance between the benefits and negative impacts of the open borders reflects one of the key dynamics of border economies. In particular, while the open borders benefit the consumer due to price and quantity advantages, the traders are affected by the intensified competition from the cheap and informally exchanged imported goods. This observation aligns with empirical observations of the impact of informal cross-border trade on the Nepalese and South Asian economies, where the negative impact of price differentials on domestic producers and traders has been evident (Karki, 2020; Sharma & Khatri, 2021).

The analysis further indicates that these competitive forces translate into actual financial concerns for small businesses. The mean values of financial instability and lower profit margins, all of which are above 4.0, demonstrate the perceived economic pressures associated with competition. It is important to notice that the slightly higher standard deviation of business sustainability may reflect the heterogeneity of the perceived impact of competition. This may mean that some businesses are more resistant to the impact of competition than others. This could be due to several factors, such as capital and business scale. However, the general trend of the findings indicates that small businesses may lose financial stability and may be less likely to sustain long-term business due to long-term exposure to competition from external sources. These findings are in line with previous studies on the susceptibility of small businesses in border regions, especially in developing economies with inadequate regulatory and institutional backing (Singh & Verma, 2019; UNDP, 2022).

From the perspective of the policies, the analysis demonstrates the existence of a significant gap between the expectations of the stakeholders and the level of perceived effectiveness of the existing frameworks of regulation. While the respondents demonstrated near-neutral opinions regarding the capacity of the existing regulations to support local businesses (mean \approx 3.0), they also expressed very high levels of agreement regarding the need to restructure the open border system (mean = 4.43) and the need to increase support from the government (mean = 4.55). The high level of consistency in the expressed opinions regarding the need to restructure the open border system and the level of support from the government also demonstrates the high level of agreement regarding the need to improve the existing policies to make them more responsive to the challenges of open border trade, including the issue of informal trade practices.

These findings are in line with overall findings in South Asia, as border management systems in this region tend to focus on trade facilitation but ignore economic conditions at local levels (ADB, 2020; Newman et al., 2006). The high level of demand for intervention policies identified in this study suggests that stakeholders prefer a more balanced approach that maintains the advantage of open borders while introducing policies to support local economies.

Overall, the study proves the value of stakeholder perceptions in gaining a deeper understanding of the micro-economic effects of open border systems, which might not be fully revealed through the application of macro-economic data. The results of this study reveal the dual nature of open borders, in which the advantages for consumer welfare are matched by disadvantages for local producers and traders. This study adds empirical evidence on the importance of taking into account the views of local stakeholders in the formulation of border trade policies, as emphasized in the latest literature on the subject.

Conclusion

This study aimed at exploring the perceptions of local stakeholders regarding the economic impacts of the open border at Gaddachauki on the market of Mahendranagar using a descriptive survey design with 150 respondents. The findings of this study reveal that the open border has economic opportunities as well as challenges, which is a clear reflection of the two-edged economic impacts of the open border at the local level. Even though the respondents perceive the benefits of the open border in the form of the availability of goods as well as lower prices, these benefits are limited only to consumers.

At the same time, the study points out that increased competition in the local market arising from the influx of imported products is viewed as a significant structural challenge that is leading to a decline in profitability, financial volatility, and uncertainty. These findings suggest that the benefits of border trade are not evenly distributed, with local businesses carrying a disproportionate burden of the economic burden. These perceptions point to the weakness of small-scale businesses in border markets, especially in an environment where informal practices are the dominant form of border trade.

Most importantly, the study reveals a notable gap between existing policy structures and stakeholder perceptions. In other words, there is limited confidence in the efficiency of existing regulations, while there is considerable consensus on the importance of restructuring the border trade system and increasing support provided by the government. This indicates that the current policy structures may be insufficient in addressing local market distortions and ensuring the sustainability of local competitiveness.

The study is important in the sense that it adds value to the existing literature on border trade and management. In particular, it offers contextual and perception-based evidence on border trade in a Nepalese border market, which is relatively understudied. From a policy point of view, the study

suggests that there is a need to ensure a more balanced and integrative border management strategy that addresses both the efficiency of border trade and the sustainability of local markets. Future studies can be based on this study and expand on it by using comparative regional analysis and combining perception-based evidence with objective economic evidence.

References

- Adhikari, R. (2017). Informal cross-border trade and its impact on local markets in Nepal. *Economic Journal of Development Issues*, 23(1–2), 45–60.
- Ahmed, S., & Rahman, M. (2015). Small business sustainability in competitive markets: Evidence from border regions. *Journal of Small Business and Enterprise Development*, 22(3), 456–472. <https://doi.org/10.1108/JSBED-01-2014-0012>
- Anderson, J. E., & O’Dowd, L. (1999). Borders, border regions and territoriality: Contradictory meanings, changing significance. *Regional Studies*, 33(7), 593–604. <https://doi.org/10.1080/00343409950078648>
- Anderson, J. E., & van Wincoop, E. (2004). Trade costs. *Journal of Economic Literature*, 42(3), 691–751. <https://doi.org/10.1257/0022051042177649>
- Asian Development Bank. (2020). *Border trade and economic corridors in South Asia*. Asian Development Bank. <https://www.adb.org>
- Bhagwati, J. (2004). *In defense of globalization*. Oxford University Press.
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman.
- Government of Nepal. (2021). *Trade policy review*. Ministry of Industry, Commerce and Supplies.
- Karki, B. (2020). Cross-border trade and challenges for local markets in western Nepal. *Economic Journal of Nepal*, 43(1), 45–60.
- Krugman, P. (1991). Increasing returns and economic geography. *Journal of Political Economy*, 99(3), 483–499. <https://doi.org/10.1086/261763>
- Little, P. D., Hummels, D., & Vlachos, J. (2018). Informal trade and border economies in developing countries. *World Development*, 108, 102–115. <https://doi.org/10.1016/j.worlddev.2018.03.010>

- Mohan, R., & Raj, R. (2017). Informal cross-border trade in South Asia: Policy challenges and economic implications. *South Asian Economic Journal*, 18(2), 215–232. <https://doi.org/10.1177/1391561417707984>
- Newman, D. (2006). The lines that continue to separate us: Borders in our “borderless” world. *Progress in Human Geography*, 30(2), 143–161. <https://doi.org/10.1191/0309132506ph599oa>
- Newman, D., Paasi, A., & Prokkola, E. (2006). Borders and border management in contemporary Europe. *Geopolitics*, 11(1), 1–13. <https://doi.org/10.1080/14650040500524002>
- Paudel, R. C. (2019). Trade openness and regional integration in Nepal. *NRB Economic Review*, 31(2), 1–15.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). Wiley.
- Sharma, P., & Khatri, S. (2021). Informal imports and market competitiveness in Nepalese border towns. *Journal of Business and Social Sciences Research*, 6(2), 55–68.
- Shrestha, M. (2018). Open borders and regional trade in the Nepal–India context. *South Asian Economic Review*, 10(2), 112–128.
- Singh, R., & Verma, P. (2019). Financial vulnerability of small firms in border economies. *Journal of Development Studies*, 55(4), 789–804. <https://doi.org/10.1080/00220388.2018.1430779>
- Todaro, M. P., & Smith, S. C. (2020). *Economic development* (13th ed.). Pearson Education.
- United Nations Development Programme. (2022). *Inclusive trade and local economic development*. UNDP. <https://www.undp.org>
- World Bank. (2019). *Nepal development update*. World Bank Group. <https://www.worldbank.org>

Women's Financial Empowerment through Microfinance in Nepal: Evidence from Regression Analysis

Upendra Sunar¹, Baburam Rawat² (¹Lecturer, Brixton College, Nepal, ²Assistant Professor, Faculty of Management, Far Western University, Nepal)

How to Cite

Sunar, U., & Rawat, B. (2026). Women's Financial Empowerment through Microfinance in Nepal: Evidence from Regression Analysis. *Brixton Scholarly Review*, 3(01), 47–66. <https://doi.org/10.3126/bsr.v3i01.93448>

Abstract

Women's financial empowerment is an important dimension of inclusive growth, but the empirical evidence on the determinants of women's financial empowerment in the context of the developing world remains scarce. The present study attempts to examine the determinants of women's financial empowerment in the context of the women beneficiaries of microfinance services in Nepal. The primary data were collected from 400 women beneficiaries of some microfinance organizations in Nepal through the structured questionnaire method. The study applied various statistical tools, i.e., descriptive statistics, correlation analysis, and regression analysis, to examine the relationship between women's financial empowerment and various socio-economic variables. The findings of the study suggest that decision-making power is the most important factor in women's financial empowerment, followed by asset ownership, as these two variables are highly correlated with women's financial empowerment at 0.352 and 0.319, respectively. On the other hand, family support, income, and education are the other important determinants of women's financial empowerment, as these variables are highly correlated with women's financial empowerment at 0.231, 0.176, and 0.084, respectively. The study also found that the regression analysis explains 61.2 percent of the variation in women's financial empowerment, as the R^2 value is 0.612 in the present study. In line with the broader literature on financial inclusion, the study proposes that the addition of non-financial services such as financial literacy and advisory services can potentially improve empowerment outcomes. The results are useful for microfinance institutions, cooperatives, and development agencies aiming at promoting women's financial empowerment in developing countries.

Keywords: Women's Financial Empowerment, Microfinance, Decision-Making Power, Asset Ownership, Financial Inclusion, Nepal

Introduction

Women empowerment in terms of financial empowerment has become a dominant theme in much of the current development finance and inclusive growth literature. Women in developing countries are systematically denied access to financial resources and are excluded in the decision-making process in the economy. Women are also denied access to productive assets. This has created inequality in society,

affecting the welfare of individuals and the economy as a whole. Women empowerment as a social need for sustainable development (Loomba, 2020; Khulood, 2019).

However, with the course of time, financial systems based on microfinance and cooperative-based financial systems have come to be regarded as significant tools in the alleviation of financial exclusion faced by women. The financial services offered by microfinance institutions include loans, savings, and insurance services to low-income groups, who are normally excluded from accessing banking services (Otero 1999; Ledgerwood 1999). On the other hand, financial systems based on cooperative models focus on collective participation, as well as building togetherness on the ground through closely linked socio-economic goals such as financial literacy, training, and advisory services (Ojha, 2018; ILO, 2016). The underlying assumption on which both financial models were based was that with greater access to financial services, women would be able to engage more in income-generating activities, thereby becoming more empowered.

Yet, the issue of women empowerment continues to be a tick box exercise, particularly in rural and developing countries. Yet, the gender inequality and disparity are evident in the economic, social, and political dimensions of Nepal. While significant strides have been made in terms of constitutional reforms, gender quotas, and development programs in place, women still lag behind men in terms of opportunities and access to education, economic resources, and positions of power and decision-making (Mahat, 2003; ICIMOD, 2014), particularly rural and disadvantaged women. The patriarchal values and low literacy levels, coupled with the lack of economic resources and asset ownership, make women more vulnerable and dependent in the economy (Tiwari et al., 2009). In light of this, Nepal's microfinance sector has emerged as one of the key sectors for attaining national objectives of poverty reduction and financial inclusion. Given that microfinance institutions have been expanding their outreach to individuals of low income levels, many microfinance institutions target women as key beneficiaries through their approach of using group lending, mandatory savings, and regular meetings for fostering financial discipline and social solidarity (Regmi 2000; Khandker 2016). Empirical research from Nepal has shown that women's participation in microfinance programs has been correlated with positive outcomes for household income, savings, and asset management (Shrestha, 2018; Gurung & Rana, 2025).

Microfinance does not guarantee changes in the lives of the poor. Despite the fact that access to credit can raise one's income and consumption, various studies show that financial services alone may not solve structural gender inequalities. Women frequently lack the financial literacy and expertise to run a business, as well as the ability to consult with someone. These two factors impede their ability to use a loan and control finances (Subedi & Karki, 2022; Gurung, 2021). Furthermore, patriarchal family structures often affect woman's mobility. Thus, women often divert loans or men control finances (Khan & Noreen 2012; Regmi 2011).

Recent studies are increasingly emphasizing the importance of combining access to finance with corresponding levels of financial literacy, training, and advisory services. Cooperative-based financial models have been recognized as an effective tool for delivering non-financial interventions. According to empirical evidence, cooperative financial literacy programs are recognized as effective in improving women's financial literacy, confidence, and savings, as well as influencing their decision-making autonomy (Kaiser & Lusardi, 2024; Negi & Jaiswal, 2024). Advisory services are also recognized as effective in improving women's enterprises, risk management, and long-term financial goals for strengthening their economic resilience and empowerment (Ojha, 2018; Sharma & Shahi, 2022).

From a financial perspective, women empowerment as a construct encompasses several dimensions such as financial inclusion, savings, asset ownership, income generation, and financial independence. These are not just important constructs from a social perspective, but they are also important from an economic perspective. Women who are financially independent are more likely to invest in productivity-enhancing activities, in education, health, and sustainable development, thus contributing to economic development at the household as well as the community level (Sell & Minot, 2018; Ali et al., 2022). Therefore, women financial empowerment can be seen as a development objective in its own right as well as a catalyst for economic development.

Though the body of literature on microfinance and women's empowerment is rising, we also face some gaps in the existing literature. One of the gaps in the existing literature on microfinance and women's empowerment is that, despite the rising body of empirical literature, most of the existing empirical literature focuses on the income or savings channel rather than the empowerment channel. Poverty reduction initiatives, including those of microfinance programs, are largely analyzed in isolation from the broader relations that involve financial literacy and training programs, as well as advisory methods, as mediator variables. The third gap relates to the disconnect that exists between the empirical microfinance literature and the systematic evidence that comes from the cooperative finance literature in the context of developing economies such as Nepal (Lamichhane, 2021; Khurshed et al., 2021).

This study aims to address these gaps by using microfinance institutions in Nepal as an empirical base, along with the application of knowledge bases in cooperative financial literacy, cooperative training, and advisory research. This study, through a finance transformative analytical method, aims to examine the mediating factors through which microfinance services empower women financially, such as education, income, family support, decision-making power, and asset ownership. This study contributes to the theory and empirical content by using the field of cooperative finance and US cooperative societies.

This study can be seen to have made at least three major contributions. Firstly, the study offers robust evidence on the factors that affect the financial empowerment of women in the context of the Nepal microfinance sector. Secondly, the study situates the evidence within the context of the larger

cooperative finance system with special emphasis on the role of non-financial interventions in the empowerment of women. Finally, the study offers relevant insights to financial institutions and cooperatives as well as development organizations on how to promote the financial empowerment of women in developing economies sustainably and inclusively.

It is with this background that the present study aims to contribute to this line of literature by examining the factors that shape women's financial empowerment among the microfinance client population in Nepal. More specifically, the study examines the relationship between key socio-economic and agency factors such as human capital (education levels), economic capital (income levels, support from family members, etc.), and financial management and asset ownership in relation to financial empowerment.

Literature Review

Women empowerment is generally defined as a holistic construct that has four broad aspects—economic, social, psychological and political. From the perspective of economics, empowering entails giving women access to material resources and financial decision-making, economic independence, and control over productive assets (Zimmerman 2000; Sell & Minot 2018). Financial empowerment allows women to allocate resources efficiently, manage risks, and prepare for a sustainable future—considerations which are important to household wellbeing and sustainable development overall (Loomba, 2020).

Microfinance and cooperative finance have employment as an important social inclusion tool in the context of "Empowerment." Microfinance is "the provision of financial services, such as specialized loans, savings accounts, and insurance products, to low-income clients who are not served by traditional financial systems." (Otero, 1999; Ledgerwood, 1999) On the other hand, cooperative finance emphasizes the importance of collective ownership and governance, and the integration of financial services with education and skills and advisory support. (ILO 2016; Ojha 2018) Despite their common purpose of addressing and relieving financial exclusion, there are significant variations in the form of microfinance and cooperative finance in terms of their institutional and delivery structures.

There is a significant amount of empirical evidence that suggests that there is a positive correlation between microfinance and women's empowerment. From the analysis of the findings of different studies carried out in Nepal, it is confirmed that the advantage of using microfinance services lies in women's ability to earn an income, their saving habits, and their involvement in decision-making (Shrestha, 2018; Paudel & Thapa, 2019). Microfinance loans are used by women members of the community to start businesses such as agriculture, cattle farming, and small businesses such as tailoring and shops (Koirala, 2020; Acharya, 2019).

Multiple studies show microfinance participation is correlated with increased women's social and psychological empowerment. Participating in group lending programs and meeting regularly has

demonstrated to bolster self-confidence, communication ability, and community engagement (Bajracharya & Manandhar, 2020; Bhattarai, 2020). The same trend holds true in other areas as well, where women participating microfinance programs are also more likely to assume leadership positions within cooperatives and local organizations (Luitel & Maharjan, 2021; Paudel, 2018).

Nevertheless, the effect of microfinance on the empowerment of individuals is not the same. Various studies indicate that ethnic and gender discriminatory values regarding the structure of families still influence women who borrow loans with the objective of paying them back, while at the same time keeping their level of access to resources at a low level (Subedi & Karki, 2022; Gurung, 2021). In some cases, men even decide on the usage of the loans, hence limiting the level of independence of women (Khan & Noreen, 2012; Regmi, 2011).

As indicated in the last literature, non-financial interventions have been recognized as playing an important role in supporting the empowerment potential of financial services. Indeed, financial literacy programs have been recognized as playing an important role in increasing women's knowledge on matters such as budgeting, saving, borrowing, and investment decisions on the most effective use of financial resources [24. Kaiser & Lusardi]. In this regard, cooperative-based studies have indicated that women who have been educated on financial matters are able to save more than their non-educated counterparts and are more confident in effectively planning both long and short-term plans.

Enterprise development, financial planning, and risks are also areas where training and advisory support can make further contributions towards improving the economic outcomes of women. The implementation of cooperative strategies improves business performance, income stability, and the accumulation of assets by women, as revealed by the systematic reviews conducted by Ojha (2018) and Raut (2018). Advisory support also helps to solve the problems of improper usage of loans and the pressure of paying them back, which improves the financial discipline of women (Khursheed et al., 2021).

Evidence from developing countries endorses these observations, they argue. Studies conducted in Nepal and elsewhere show that empowered outcomes are more visible for women who are given financial services and training as opposed to credit only (Dhungana, 2017; Regmi, 2018). These outcomes signal the need for an indispensable blend of financial and non-financial services for empowerment.

Cooperative financial institutions hold a proprietary and formidable position in the spectrum of financial inclusion. Cooperatives deliver access to finance, as well as complementary services such as education, training, and advisory services, thus creating an enabling environment for women empowerment (ILO, 2016; Ojha, 2018). Cooperatives create a sense of collective learning, which is crucial in maintaining empowerment (Cronery Rwekaza & Mhihi, 2016; Ferguson & Kepe, 2011).

Moreover, as per the systematic findings, cooperative-based financial literacy programs can significantly improve women's financial inclusion, savings, and asset ownership (Negi & Jaiswal, 2024; Knorr et al., 2020). In addition, cooperative participation can improve women's participation in other social and political empowerment variables such as decision-making at the micro-level and leadership positions (Sharma & Shahi, 2022; Rena, 2017). The findings showed that microfinance and cooperative finance remove different types of structural barriers to women's empowerment, with microfinance removing economic barriers and cooperative finance removing structural barriers.

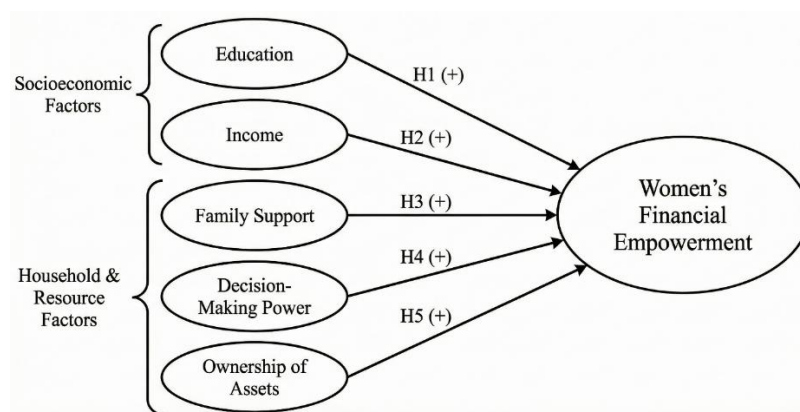
Despite the overwhelming literature being developed on microfinance and women empowerment, there are certain gaps that remain. Firstly, the literature has focused on micro studies of various economic factors such as income or savings, rather than the holistic concept of empowerment. Secondly, there has been a lack of empirical studies on microfinance, which has failed to take into consideration the mediating role of financial literacy and guidance. Finally, there has been a lack of empirical integration of microfinance studies with the systematic evidence developed in cooperative finance literature, especially in Nepal.

The objective of this study is to bridge the gaps by integrating the empirical studies on microfinance institutions being carried out in Nepal with the results of the systematic research on cooperative financial literacy, guidance, and advisory methods. This study has been carried out using a frame of reference that includes education, income, family support, decision-making power, and ownership of assets, which are used to understand the factors for women empowerment in developing economies.

Conceptual Framework

The conceptual framework is an attempt to conceptualize the relationship between the selected socio-economic and agency factors and women financial empowerment among nepalese microfinance clients. In accordance with the theory of empowerment and financial inclusion literature, women financial empowerment is a multidimensional concept that is influenced by women's education, income, family support, decision-making power, and asset ownership. Education is important in that it increases knowledge and facilitates the effective use of financial systems. Income earned from microfinance activities increases women's economic independence. Family support increases women's interest in financial fields and their ability to access resources. Having decision-making power increases women's agency in financial matters, and asset ownership increases women's long-term economic security and awareness of inequalities and empowerment.

Figure 1 presents the conceptual framework of the study.



Source: Above created conceptual framework was designed by author by taking inspiration from Khursheed et al., 2021, Negi & Jaiswal, 2024

Based on the conceptual framework and prior studies, the following hypotheses are formulated:

- H1: Education is positively associated with women's financial empowerment.*
- H2: Income is positively associated with women's financial empowerment.*
- H3: Family support is positively associated with women's financial empowerment.*
- H4: Decision-making power is positively associated with women's financial empowerment.*
- H5: Asset ownership is positively associated with women's financial empowerment.*

Methodology

Utilizing empirical evidence from research on cooperative finance to enrich analytical discussion, this paper adopts a quantitative, cross-sectional research design. It draws upon primary data collected from women beneficiaries of microfinance institutions in Nepal for the empirical analysis, whilst consolidating and corroborating detail findings on cooperative financial literacy, training and advisory services contextualizing a conceptual underpinning. Such a design is appropriate for examining the interplay among access to financial services, socio-economic determinants and women's financial empowerment in a context of emerging economy (Dhungana, 2017; Lamichhane, 2021).

This is a quantitative method that helps in the objective measurement of variables of empowerment, which can then be analyzed using econometric methods. The study of microfinance and empowerment is mostly done by using the cross-sectional method, as it is possible to obtain the results of the outcomes of the microfinance at a particular point of time (Shrestha, 2018; Gurung & Rana, 2025).

The study is majorly based on the primary data collected by surveying the women clients of the selected microfinance institutions of Nepal. The data was collected by using a structured questionnaire that aimed at evaluating the demographic characteristics, financial participation, and empowerment outcomes of the women. The questions were asked based on the various indicators of empowerment

that are commonly used in the field of microfinance, as discussed by Khan & Noreen, 2012; Sell & Minot, 2018.

The secondary data, i.e., published empirical studies, institutional reports, systematic reviews of microfinance, cooperative finance, women empowerment, etc., were also included in the study in order to provide a robust contextual understanding of the study, as discussed by Lamichhane, 2021; Khursheed et al., 2021.

The participants in the survey were microfinance clients in Nepal. The female clients of four kinds of municipal banks were selected for the study, namely, Fuli Municipal Credit Cooperative, Hui County Cooperative Bank and Huitong Town Bank of Hemp (Matrix), and Transformative Finance Service Financial Plc. These banks serve many female clients in rural areas and have gained respect from the government for promoting rural issues and encouraging participation in thrift programs.

A purposive sampling method was used for selecting 400 female respondents for the survey from different branches of these banks in rural and semi-urban areas. The participants were classified as “active microfinance beneficiaries,” referring to those female clients who had interacted with MFI initiatives for a minimum period of one year. The selected sample size of 400 was considered appropriate for the statistical regression analysis. This is because the same sample size has been used in prior empirical studies on Nepal and other developing countries for investigating microfinance and women empowerment, which results in reliable estimates with a satisfactory level of statistical power (Dhungana, 2017; Ali et al., 2012). Additionally, a sample size greater than 300 is considered appropriate for conducting multivariate statistical analysis, such as multiple regression analysis.

The sample is quite broad in terms of age group, educational qualifications, and professions and would thus provide a comprehensive understanding of the perceptions of the recipients of self-help groups and microfinance at different stages of their empowerment process. Before administering the main study, the questionnaire was pilot-tested with 30 respondents who were not part of the main sample. A few minor changes were made based on the feedback received to improve the questions in terms of clarity and structure.

We also trained the survey enumerators on survey protocol and ethics, and response bias reduction strategies. The survey questionnaire consisted of closed-end and Likert scale questions with the purpose of measuring income earned from work, power of decision-making, support provided to family members during hard times, and family assets.

The allegations that were based on data were ethical issues that were upheld in the entire process of collecting the data. The participants were educated on the purpose of the study, and they were given the option to participate in the study wherever possible. All the interviews were conducted after prior

consent. To ensure privacy and protect the data, all the statements were kept confidential and anonymous.

The dependent variable that was used in this study was women's financial empowerment. The variable was measured as a composite index that represents women's participation in financial decisions, control of income, and control of assets. These three aspects represent the essential aspects of financial empowerment that are normally used as variables in studies on financial empowerment. The variable was measured using various items on a five-point Likert scale that ranged from 1, strongly disagree, to 5, strongly agree. The values representing each item were averaged to represent a composite empowerment value. The reliability of the scale was determined using Cronbach's alpha.

The level of formal education attained by women respondents. Education improves financial knowledge, enhances the quality of decision-making, and makes financial services more efficiently utilized (Dhungana, 2017; Negi & Jaiswal, 2024). Income: The income that women respondents earn through income-generating activities with support from microfinance services. The income increases women's economic independence and power in their respective households (Shrestha, 2018; Gurung & Rana, 2025). Family support is the extent to which women's households support women's participation in financial activities/microfinance services. The supportive family environment empowers women to access economic resources by minimizing resistance emanating from patriarchal societies (Khan & Noreen, 2012; Regmi, 2011). Decision-making power is women's ability to possess power in terms of having the power to make economic decisions. It is a relevant variable that has been widely used in measuring women's empowerment (Sell & Minot, 2018; Ali et al., 2022). Asset ownership by women on their respective productive and non-productive assets such as land, cattle, business equipment, etc., through control or joint ownership. The ownership of assets by women enhances long-term financial security and empowerment (Lindgreen, 2014; Khulood, 2019).

In addition, the use of descriptive and inferential statistical data analysis techniques to analyze the data collected was appropriate as it is the commonly used approach by empirical microfinance research. Demographic Characteristics and Key Variables The descriptive statistics were used to analyze the demographic characteristics and key variables of the respondents. The technique helped to obtain an overview of the socio-economic profiles of the respondents.

In addition, inferential data analysis techniques such as the exploration of correlation to understand the relationships between independent variables and women's financial empowerment were used. To understand the relative impact of independent variables such as education, income, family support, decision-making power, and asset ownership on women's financial empowerment, a multiple regression analysis technique was used. In addition, ANOVA (Analysis of Variance) technique was used to find out if the regression model as a whole is statistically significant.

This technique has been used by many empirical research studies on women's empowerment and financial inclusion (Ali et al., 2022; Dhungana, 2017).

To find out the relative impact of independent variables such as education, income, family support, decision-making power, and asset ownership on women's financial empowerment, the following regression model was specified.

Regression Model

The multiple linear regression model is specified as follows:

$$WFE_i = \beta_0 + \beta_1 EDU_i + \beta_2 INC_i + \beta_3 FS_i + \beta_4 DP_i + \beta_5 AO_i + \varepsilon_i$$

Where:

WFE = Women's Financial Empowerment

EDU = Education level of women

INC = Income generated through microfinance-supported activities

FS = Family support toward women's economic participation

DP = Decision-making power of women

AO = Ownership of assets

β_0 = Intercept term

β_1 – β_5 = Regression coefficients measuring the marginal effect of each independent variable

ε_i = Error term capturing unobserved factors

The internal consistency of the constructs related to empowerment was checked using Cronbach's alpha test, and the reliability score was found to be satisfactory. Additional tests were carried out to validate the underlying assumptions of the regression analysis. The tests related to the Variance Inflation Factor (VIF) and tolerance values were calculated to assess the underlying assumption of no multicollinearity between the independent variables, which was found to be within the acceptable limit. Residual analysis also revealed that the underlying assumptions of normality, linearity, and homoscedasticity were met.

Results

Demographic Characteristics of Respondents

Table 1 presents the demographic profile of the 400 women respondents drawn from four microfinance institutions in Nepal.

Table 1*Demographic Profile of Respondents (n = 400)*

Variable	Category	Frequency	Percentage (%)
Age	Below 30 years	96	24.0
	30–45 years	212	53.0
	Above 45 years	92	23.0
Marital Status	Married	312	78.0
	Unmarried/Widowed	88	22.0
Education	No formal education	98	24.5
	Primary to Secondary	232	58.0
	Higher education	70	17.5
Main Occupation	Agriculture/Livestock	186	46.5
	Small business	154	38.5
	Wage employment	60	15.0

Source: Author Analysis by SPSS

The results indicate that most of the respondents are between 30–45 years old, i.e., 53%, as they are actively participating in the economy. The majority of the respondents were married, i.e., up to 80%, which shows that the participation is highly household-based. The majority of the women, i.e., over fifty percent, have received education ranging from primary to secondary education, while a significant percent, i.e., 24.5%, of the women are not educated, hence the need for the microfinance services to be supplemented with informal education on finance.

Descriptive Statistics of Key Variables

Descriptive statistics were computed to assess the central tendency and dispersion of the study variables.

Table 2*Descriptive Statistics of Study Variables*

Variable	Mean	Standard Deviation
Education	2.41	0.86
Income	3.12	0.94

Family Support	3.48	0.81
Decision-Making Power	3.67	0.78
Asset Ownership	3.26	0.89
Women's Financial Empowerment	3.54	0.73

Source: Author Analysis by SPSS

Financial empowerment of women, as indicated by the mean score of 3.54 out of five, suggests that the participants in microfinance objectively have a positive perception of empowerment. It suggests that where the power is more, i.e., the highest mean score of the variable (Decision_Making_power) is 3.67 out of five, which implies that the women are more involved in the management of the finances of the household. Income and asset ownership have higher SDs with greater variations in the economic outcomes of the respondents.

Correlation Analysis

Pearson correlation analysis was conducted to examine relationships between independent variables and women's financial empowerment.

Table 3

Correlation Matrix

Variable	Education	Income	Family Support	Decision Power	Asset Ownership	Empowerment
Education	1					
Income	0.312**	1				
Family Support	0.284**	0.346**	1			
Decision Power	0.351**	0.412**	0.458**	1		
Asset Ownership	0.298**	0.467**	0.392**	0.516**	1	
Empowerment	0.336**	0.489**	0.521**	0.682	0.657	1

p < 0.01

Source: Author Analysis by SPSS

The findings indicate that all independent variables are positively correlated with women’s financial empowerment. The highest values were found when measuring the correlation between women’s empowerment and their power to make decisions ($r = 0.682$), as well as women’s empowerment and their ownership of assets ($r = 0.657$), suggesting that women’s power to control their assets is linked with their level of empowerment. There are no serious problems with multicollinearity in the set of independent variables, as VIF values were found to be appropriate.

Multiple Regression Analysis

Multiple regression analysis was employed to identify the determinants of women’s financial empowerment.

Table 4

Regression Results: Determinants of Women’s Financial Empowerment

Variable	β Coefficient	t-value	p-value
Education	0.084	2.11	0.035
Income	0.176	3.94	0.000
Family Support	0.231	4.88	0.000
Decision-Making Power	0.352	7.46	0.000
Asset Ownership	0.319	6.91	0.000
R²	0.612		
Adjusted R²	0.603		
F-statistic	61.28		0.000

Source: Author Analysis with SPSS

The findings indicate that all the independent variables have a positive and significant relationship with women’s financial empowerment. The findings indicate that the independent variables with the strongest relationship with women’s financial empowerment are decision-making power, $r = 0.682$, and asset ownership, $r = 0.657$, which indicate that women’s agency in terms of their control over their assets positively correlates with the level of empowerment enjoyed by them. There was no serious issue of multicollinearity between the independent variables as the values of the Variance Inflation Factor (VIF) and tolerance were appropriate. The values of the independent variables explained 61.2 percent of the variance in women’s financial empowerment. The findings indicate that having decision-making power, $\beta = 0.352$, and asset ownership, $\beta = 0.319$, are the strongest predictors of attendance as they are

statistically significant at 1 percent, while having support from the family and earning income have strong positive relationships with women’s financial empowerment, whereas having educational attainment has a modest statistically significant relationship with women’s financial empowerment.

Analysis of Variance (ANOVA)

ANOVA was conducted to assess overall model significance.

Table 5

ANOVA Results

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	78.46	5	15.69	124.30	0.000
Residual	49.74	394	0.13		
Total	128.20	399			

Source: Author Analysis by SPSS

As indicated by the ANOVA table, the regression model is statistically significant, as indicated by F = 124.30 and $p < 0.001$, implying that independent variables significantly describe some of the dependent variable women’s financial empowerment variance.

Discussion

This has led to an exploration of factors related to women’s financial empowerment in microfinance and subsequent conceptual integration with cooperative financial literacy/training/advisory literature. The results of the study indicate that for women beneficiaries of microfinance programs, agency and resource-related factors are positively related to women’s financial empowerment levels. In particular, decision-making power and asset ownership were found to be the best indicators of women’s financial empowerment.

Women beneficiaries of microfinance programs have a moderately positive women’s financial empowerment level. This finding is consistent with existing literature and other empirical studies from Nepal, which indicate that women’s income, savings, and involvement in household financial decisions increase significantly for women beneficiaries of microfinance programs (Shrestha, 2018; Gurung & Rana, 2025; Jain, 2020). In particular, with regard to finance, these trends indicate an increase in women’s access to more productive capital.

However, it also shows that empowerment is not limited to income. Though income from activities facilitated through microfinance has a statistically significant relationship with women’s empowerment, it is much less than agency-related variables. This shows that women’s empowerment through access

to finance does not automatically translate into actual empowerment unless women have access and control over financial resources and also participate in decision-making at home (Regmi, 2011; Khan & Noreen, 2012).

One of the important findings of this research is related to the relatively more significant role of decision-making power than income, education, and employment variables in explaining women's financial empowerment. The results of the regression analysis show that decision-making power has the highest standardized coefficient. This shows that women's participation in decision-making at home is more important for their empowerment. This finding supports the empowerment theory, which emphasizes the role of agency and control as critical elements of empowering processes (Zimmerman, 2000).

Studies conducted in Nepal and similar contexts have also identified decision-making power as one of the significant outcomes of microfinance intervention (Sell & Minot, 2018; Ali et al., 2022). The group-based lending approaches and interactions with microfinance institutions may also contribute to this outcome because they create at least three significant changes in women's lives: increased confidence, negotiation power, and awareness of their rights. Nevertheless, patriarchal values are common in some households, and as such, this outcome may not be fully realized by women, thereby emphasizing the need to explore more strategies to address this issue.

Ownership of assets is the second significant factor that is essential in promoting women's economic freedom. The study found that women's ownership or joint control of assets is positively associated with women's empowerment. The findings resonate with other studies that highlighted the importance of asset-based empowerment as a tool to reduce vulnerability and promote women's power in households (Lindgreen, 2014; Khulood, 2019).

From an economic point of view, the ownership of assets helps women improve their ability to utilize economic services, obtain future credits, and absorb shocks. However, the constraints that rural women in Nepal face in the accumulation of assets are many, ranging from legal, cultural, and institutional issues.

The study has discovered that the support of the family has a major influence on the women's financial empowerment. The violent environment of the families restricts women from participating in income-generating activities and denies them the opportunity of controlling their resources financially. This is in line with the previous studies that have focused on the intra-hh as the cause of differences in the level of empowerment between women (Khan & Noreen, 2012; Regmi, 2011).

On the other hand, family support was a factor that could reduce the positive effects of microfinance participation, and this is because, without it, it could lead to loan diversion, repayment pressure, or loss

of autonomy. This has shown that empowerment interventions are not only focused on the woman as an individual.

In conclusion, the income that they are able to generate from the microfinance activities significantly and positively contributes towards the empowerment of women, thus strengthening the argument for microfinance as a tool for poverty alleviation and income generation. This is because the coefficient is relatively low, thus implying that income on its own does not lead to empowerment. This has shown that prior studies are right in stating that income gain is not enough without the inclusion of control and decision-making authority in order for empowerment to take place (Loomba, 2020; Khulood, 2019).

Education also has a positive impact on empowerment, but the impact is less compared to the impact of the other variables. This may be attributed to the low level of formal education achieved by women in Nepal, as well as the information gained through the informal learning process through microfinance programs.

Systematic review findings suggest that financial knowledge and competence may be improved through cooperative financial literacy and training programs, thus compensating for the lack of formal education (Lamichhane, 2021; Negi & Jaiswal, 2024).

The study adds strength to the building of financial empowerment alone, aside from microfinance, as it makes a small contribution to the reconciliation of the findings through the integration of the insights gained from the effectiveness of microfinance programs through the body of knowledge on non-financial interventions in the field of cooperative finance. There is cumulative evidence that confirms the effectiveness of collective financial literacy, training, and counseling programs in improving women's empowerment (Ojha 2018; Sharma & Shahi 2022).

The results of this study, with respect to the significant impact of decision-making power and asset ownership (along with income), support that agency and control over resources is an important factor in financial empowerment. These results are consistent with the broader cooperative finance literature in that education and learning may also support financial empowerment outcomes. These factors may be important in enhancing women's financial literacy and their ability to contribute to economic decisions and ensure the effective use of financial services in financial empowerment.

The purpose of this research is to examine the factors that determine women's financial empowerment in the context of microfinance in Nepal. This study conceptually links the factors with women's cooperative financial literacy, training, and advisory. This study uses quantitative methods such as descriptive statistics, correlation analysis, multiple regression analysis, and ANOVA to provide robust empirical evidence on the impact of microfinance on women's financial empowerment in both economic and agency-related dimensions.

Conclusion

The results indicate significant and substantial improvements in the level of financial empowerment of female microfinance institution beneficiaries. However, this empowerment cannot be explained by income.” The most significant predictors are decision-making power and, to a lesser extent, asset ownership, which illustrate the importance of women’s agency and control over economic resources as the more significant predictors. Furthermore, family support is also significant, which highlights the role of the family in the context of women’s financial independence. While income and education are found to positively affect the empowerment dimensions, the relatively low importance of these variables suggests that the role of financial mechanisms cannot be effective in the absence of the enabling social and institutional context.

The global and national level perspectives of the subsequent research work reveal the potential implications of the research work on the field of microfinance and cooperate finance literature, based on the need to have a holistic approach in empowerment that includes access to funds and non-financial support mechanisms such as financial literacy and training. This is an attempt at an improvement in the impact of microfinance on empowerment. This is based on a multidimensional view of women’s financial empowerment that is not based on access to financial services but on the ability to use such access in conjunction with timely institutional and social arrangements.

The findings have a few possible implications for policy. First, there is a need to ensure that microfinance institutions not only provide financial services but also include financial literacy, business training, and advisory services to enhance women’s economic power. There is also a need to ensure that policies include legal and institutional reforms to enhance women’s economic power by ensuring their right to property ownership and control, especially policies that focus on ensuring that women have power to make decisions regarding property ownership. Finally, there is a need to raise awareness within households and communities to change patriarchal attitudes that are against investing in women’s economic independence.

This study contributes to the literature on finance and development by offering evidence on the multidimensional concept of women’s financial empowerment with its economic and agency components. However, the study is not without limitations. The limitation of the cross-sectional design does not allow causal analysis and the possibility of self-reported bias. Future studies can consider the longitudinal design and the institutional model on the role of digital financial services in women empowerment in developing economies using the longitudinal design.

References

Acharya, S. (2019). Microfinance participation and women’s empowerment in rural Nepal. *Journal of Development Studies*, 12(2), 45–58.

- Ali, M., Mughal, M., & Chhorn, T. (2022). Empowering women through microfinance: Evidence from Djibouti. *Journal of International Development*, 34(4), 589–610.
<https://doi.org/10.1002/jid.3601>
- Bajracharya, B., & Manandhar, R. (2020). Microfinance and women's socio-economic empowerment in Nepal. *Nepalese Journal of Development and Rural Studies*, 17(1), 65–78.
- Bhattarai, P. (2020). Women's empowerment through microfinance institutions in Nepal. *Journal of Asian Development Studies*, 9(2), 134–148.
- Cronery Rwekaza, G., & Mhihi, B. (2016). Co-operative development in Tanzania: A tool for equality and socio-economic development. *Journal of Economics and Sustainable Development*, 7(6), 29–40.
- Dhungana, B. (2017). Microfinance interventions and women empowerment in western Nepal. *Economic Journal of Development Issues*, 23(1–2), 45–63.
- Ferguson, H., & Kepe, T. (2011). Agricultural cooperatives and social empowerment of women: A Ugandan case study. *Development in Practice*, 21(3), 421–429.
<https://doi.org/10.1080/09614524.2011.558068>
- Gurung, S. (2021). Microfinance participation and financial inclusion among rural women in Nepal. *Journal of Finance and Rural Development*, 8(1), 72–85.
- Gurung, S., & Rana, K. (2025). Microfinance and poverty reduction among women in eastern Nepal. *Asian Journal of Economics and Banking*, 7(1), 112–129.
- ICIMOD. (2014). *Women, gender and development in Nepal*. International Centre for Integrated Mountain Development.
- ILO. (2016). *Cooperatives and the sustainable development goals*. International Labour Organization.
- Jain, R. (2020). Microfinance services and women's empowerment in Biratnagar metropolitan city. *Journal of Finance and Development Studies*, 6(3), 88–101.
- Kaiser, T., & Lusardi, A. (2024). Financial literacy and financial education: An overview. *Journal of Economic Perspectives*, 38(1), 165–190. <https://doi.org/10.1257/jep.38.1.165>
- Khandker, S. R. (2016). *Microfinance and poverty reduction: Evidence using panel data from Bangladesh*. World Bank.
- Khan, R. E. A., & Noreen, S. (2012). Microfinance and women empowerment: A case study of district Bahawalpur, Pakistan. *International Journal of Social Economics*, 39(9), 673–688.
<https://doi.org/10.1108/03068291211245940>

- Khulood, A. (2019). Women empowerment through microfinance. *International Journal of Finance and Economics*, 11(2), 34–49.
- Khursheed, A., Khan, S., & Mustafa, U. (2021). Women’s social empowerment and microfinance: A systematic literature review. *Journal of Gender Studies*, 30(6), 681–697.
<https://doi.org/10.1080/09589236.2020.1846011>
- Knorr, K., Alvarez, S., & Nippierd, A. (2020). Cooperative finance and women’s empowerment in developing economies. *Journal of Cooperative Studies*, 53(2), 21–35.
- Koirala, S. (2020). Microfinance and women entrepreneurship development in Nepal. *Nepalese Journal of Entrepreneurship*, 5(1), 55–69.
- Lamichhane, R. (2021). Microfinance for women empowerment: A review of best practices. *Journal of Development and Social Change*, 4(1), 23–38.
- Ledgerwood, J. (1999). *Microfinance handbook: An institutional and financial perspective*. World Bank.
- Lindgreen, A. (2014). Microfinance and women’s empowerment in Bangladesh. *Journal of Development Economics*, 108, 1–15. <https://doi.org/10.1016/j.jdeveco.2014.01.002>
- Loomba, S. (2020). Role of microfinance in women empowerment: A study of self-help groups in India. *International Journal of Social Economics*, 47(1), 1–18. <https://doi.org/10.1108/IJSE-03-2019-0204>
- Luitel, B., & Maharjan, K. (2021). Women’s empowerment through participation in microfinance groups in Nepal. *Journal of Rural Development*, 40(2), 289–304.
- Mahat, I. (2003). Women’s development in Nepal: The myths and realities. *Journal of Nepalese Studies*, 6(2), 67–82.
- Negi, P., & Jaiswal, A. (2024). Impact of financial literacy on consumer financial behavior: A systematic review. *International Journal of Consumer Studies*, 48(3), e13053.
<https://doi.org/10.1111/ijcs.13053>
- Ojha, B. R. (2018). Women entrepreneurship development through cooperatives. *Management Dynamics*, 21(1), 61–78. <https://doi.org/10.3126/md.v21i1.27048>
- Otero, M. (1999). Bringing development back into microfinance. ACCION International.
- Paudel, S. (2018). Microfinance participation and women’s empowerment in rural Nepal. *Journal of Development and Social Policy*, 9(1), 88–101.

- Paudel, S., & Thapa, B. (2019). Financial inclusion and women's empowerment in Nepal's microfinance sector. *Nepalese Economic Review*, 32(1), 59–75.
- Raut, R. (2018). Cooperative financial literacy and women empowerment in Nepal. *Journal of Cooperative Development*, 7(2), 41–53.
- Regmi, H. R. (2000). Poverty alleviation programs in Nepal: A review. *Economic Review*, 12(1), 33–48.
- Regmi, H. R. (2011). Microcredit, gender and empowerment in Nepal. *Journal of Development Policy*, 7(2), 91–109.
- Regmi, H. R. (2018). Microfinance and financial inclusion in rural Nepal. *Journal of Economic Development*, 14(1), 75–89.
- Rena, R. (2017). Cooperatives and women empowerment in developing economies. *International Journal of Cooperative Studies*, 6(1), 1–9.
- Sell, M., & Minot, N. (2018). What factors explain women's empowerment? Decision-making among small-scale farmers in Uganda. *Women's Studies International Forum*, 71, 46–55.
<https://doi.org/10.1016/j.wsif.2018.09.005>
- Sharma, L. K., & Shahi, M. B. (2022). Role of cooperatives in women empowerment: A case of Surkhet district, Nepal. *Cognition*, 4(1), 43–54. <https://doi.org/10.3126/cognition.v4i1.46442>
- Shrestha, P. (2018). Microfinance and women's empowerment in Nepal. *Journal of Development Research*, 10(2), 67–82.
- Subedi, R., & Karki, B. (2022). Microfinance and women entrepreneurship in Chitwan district. *Journal of Entrepreneurship Development*, 10(2), 99–115.
- Tiwari, S., Shrestha, S., & Devkota, B. (2009). Gender inequality and women's empowerment in Nepal. *Nepal Journal of Social Sciences*, 6(1), 35–52.
- Zimmerman, M. A. (2000). Empowerment theory: Psychological, organizational, and community levels of analysis. In J. Rappaport & E. Seidman (Eds.), *Handbook of community psychology* (pp. 43–63). Springer. https://doi.org/10.1007/978-1-4615-4193-6_2

Digital Labour and Migration Intention: Evidence from Nepalese Youth in the Gig Economy

Priti Singh K. (Lecturer, Brixton College, Nepal)

How to Cite

Singh K., P. (2026). Digital Labour and Migration Intention: Evidence from Nepalese Youth in the Gig Economy. *Brixton Scholarly Review*, 3(01), 67–83. <https://doi.org/10.3126/bsr.v3i01.93451>

Abstract

This study aims to examine the relationship between participation in the gig economy and migration intention for Nepalese youth. This study was conducted using a quantitative and cross-sectional method, in which data were collected through questionnaires from 401 respondents aged between 18 and 35 years in Kathmandu, Pokhara, and Chitwan. The migration intention was taken as the dependent variable, while gig income, income stability, payment accessibility, and social prestige were taken as independent variables. SPSS software was used for data analysis, in which all four variables are negatively related with migration intention as per VIF results at 1% significance level. Income stability, gig income, payment accessibility, and social prestige are the top four predicting variables, in that order, as per beta value, which are -0.31, -0.24, -0.19, and -0.17, respectively. The model explained a moderate level of variance for migration intention ($R^2 = 0.24$), with the model explaining 24% of the variance in migration intention. What the findings of this study tell us is that lower migration intentions are associated with greater predictability of income, payment systems, and social recognition of gig work. The findings of this study tell us that the gig economy is a 'complementary livelihood pathway' and not a 'substitute for migration.' It is not unconditional, with the relationship between such work and migration intention being found in globally connected digital work, and not in locally bounded gig work. This study contributes to migration theory by pointing out the digital pattern of work, which changes conventional migrations in developing economies.

Keywords: *Gig economy, Migration intention, Digital labour, Youth employment, Online freelancing, Nepal*

Introduction

The labour migration has actively influenced Nepal's socio-economy since ages. The foreign employment, especially in Gulf Cooperation Council countries, Malaysia, and some developed countries, has become a default mode of livelihood for the youth of Nepal. The remittance received through foreign employment has provided significant welfare to the family, besides being a significant contribution to foreign exchange earnings by the host countries. It is noteworthy that such welfare comes with a huge social and economic cost in terms of family separation, exploitation, and brain drain (Paudel, 2022; Khanal, 2023)

In recent years, such significant technological advancements in digitization have improved internet connectivity, thereby enhancing alternative forms of labour participation through internet-based labour platforms without physical migration. The alternative labour participation through internet-based platforms such as Upwork, Fiverr, Pathao, Tootle, etc., with the help of mediators on Instagram, enable individuals to sell their labour or services across countries while they remain in their respective countries with economic gains through cross-border transactions.

This has created new ways of earning income that disconnect the relationship between work and physical mobility, dissolving forms of employment relations in developing economies (International Labour Organization [ILO], 2021). Therefore, the income earned from digital work can be seen as a form of digital remittance—a form of income earned from the global or non-local playing field without the simultaneous migration of the physical self (Khadka & Khadka, 2021; Khanal, 2023).

The gig economy has emerged as the new reality of the future of work with the creation of short-term flexible forms of employment in the economies of the globe. Globally, evidence suggests that the creation of platform-based work has increased significantly in developed and developing economies with the support of employer requirements for flexibility in the labor force and the desire of the labor force to diversify income sources (World Bank, 2019; ILO, 2021). There is an increased volume of literature that highlights the relationship between the gig economy and migration processes.

More specifically, digital platforms facilitate migrant labour directly by reducing entry barriers such as the recognition of qualifications, the use of languages, and the requirement of formal employment contracts, which act as informal migration infrastructures (Altenried, 2019; van Doorn et al., 2021). However, the precariousness of platform labour is closely related to the precariousness of the income, which generates concerns about the sustainability of this type of work in the future (Graham & Anwar 2019) In developing countries, especially in South Asia, the gig economy has the potential to facilitate another, though not extensively researched, purpose of the digital platforms. Nevertheless, with the flexibility of work, the digital labour platforms create an economic opportunity that may, at least in part, address the economic needs that drive physical migration.

The circumstantial and policy studies reveal that with the help of online freelancing and digital service exports, the workers of developing economies are able to gain access to the global labour market as well as foreign sources of earning without the need to step out of their home countries (Kathuria et al., 2019; Mehta & Kumar, 2021). The COVID-19 pandemic has accelerated this trend by creating more remote work opportunities as well as the increased usage of digital platforms by the workers who were forced out of their traditional employment sectors (Mehta & Kumar, 2021; ILO, 2021). Nevertheless, the current state of knowledge about the influence of digital jobs on migration-related decision-making is not well understood.

This is particularly important in the context of Nepal, as the unemployment rates, differences in wages, absence of domestic opportunities, along with the strong social norms that emphasize the need to find employment abroad, contribute to the high rates of youth out-migration in the country.

At the same time, the digital labor market of Nepal, especially with reference to information technology, creative services, and online freelancing, has witnessed tremendous growth, reflecting an increased economic viability of these modes of work (Khanal, 2023). The literature with reference to Nepal suggests that digital labor markets facilitate income generation, access to global markets, and personal branding with low capital costs. However, there still exist some barriers for paid participation, including those of regulation and institutions (Maharjan & Gurung, 2020; Khadka & Khadka, 2021; Parajuli, 2021).

In spite of such development, literature on the gig economy of Nepal still lies in scattered form. The existing literature includes freelancer job satisfaction (Khadka & Khadka, 2021), freelancing as an engagement for students (Parajuli, 2021), gig economy-based food delivery and ride-hailing services (Joshi et al., 2022), and regulation and financial infrastructure challenges for the digital labor periphery sector of the economy (Khanal & Khanal, 2023).

Although these studies contribute significantly to the understanding of the pattern of platform utilization and gig work outcomes, they fail to take into consideration the role of employment experiences in traditional jobs in the outcomes of gig work. Most significantly, these studies fail to empirically examine the role of participation in the digital gig economy in the decision-making of Nepalese youth regarding international migration (Paudel, 2022; Khanal, 2023).

In terms of an academic reference point, the decision-making regarding international migration in Nepal has been understood in terms of push-pull factors, with employment opportunities being low in the national economy, thus being the key push factors, and wage differentials and social mobility being the key pull factors in international migration decision-making. The emergence of digital labor has further complicated these factors because it has become possible for individuals to contribute to international labor markets without any change in their geographical location. Recent theories on digital labor and platform capitalism have introduced the concept of “virtual migration,” in which the movement of labor happens without any geographic movement, which has the potential to change the motivations for international migration (Graham & Anwar, 2019; Altenried, 2019).

This can, in turn, dilute conventional push pull factors before abolishing migration aspirations altogether: Similar to a fluid-on-porous structure effect. In this context, this paper aims to empirically examine whether participation in online gig economies affects migration intention among Nepalese youth. The paper is based on primary survey data collected from 401 freelancers, gig workers, and youth in major cities in Nepal. The paper highlights the importance of migration intention as a surrogate

measure of migration propensity within an electronically linked urban youth group rather than actual migration consequences.

This study employs descriptive statistics, correlation analysis, and multiple regression analysis to provide empirical evidence to the ongoing debates on digital labor and migration with respect to the context of developing economies. This study also contributes to the extension of the existing migration frameworks by examining the effect of access to digitally mediated income opportunities on the change in new generation migrants related attitudes among the youth in urban areas (Kathuria et al., 2019; Khadka & Khadka, 2021; Paudel, 2022).

Literature Review

The relationship between labour mobility and economic opportunity has traditionally been conceptually linked with theories of migration, particularly the push-pull theory. This theory suggests that people migrate because of the lack of opportunities in their own countries and are attracted towards better wages and living in another location, far from their own. Structural push factors such as unemployment and low wages, along with poor career advancement opportunities, and pull factors such as wage differentials, which are much higher in international employment compared to local employment, and perceptions of social mobility in international employment have been key factors in the migration of people in Nepal (Paudel, 2022; Khanal, 2023). However, the emergence of digital labour markets is a major shift in this pattern, as it allows individuals to interact with the global labour market without migrating.

The theoretical formulations related to the concept of digital labor and platform capitalism describe this change as the phenomenon of “virtual migration,” which describes the decoupling of the mobility of labor from physical migration and its facilitation through digital forms of work arrangements (Graham & Anwar, 2019; Altenried, 2019). This concept describes the migrant labor in the digital economy as likely to reduce the push factors of migration in the classical sense, with the socio-cultural pull factors of migration remaining relatively untapped and therefore acting as the dual factors of migration.

The concept of the gig economy describes the short-term and flexible forms of employment that have increased dramatically in the developed and developing economies of the world. The major literature related to the concept of the gig economy describes the role of digital platforms as not only acting as labor markets but also as infrastructure to facilitate the reorganization of the mobility of labor.

According to Altenried (2019), platforms reduce entry barriers, like the recognition of credentials and the need for formal employment which enables workers scenarios in global labour systems without requiring physical migration. Likewise, van Doorn et al. (2021) note that platform capitalism both enables the selective extraction of labour and reassigns risks to workers, resulting in some combination of precarious and fractured employment conditions. From a global perspective, the gig economy is

defined as a planetary labour market that operates globally, through opportunities being simultaneously local to socio-economic structures of which workers remain an intrinsic part (Graham and Anwar 2019). These frames indicate that despite the digital labour extending access to income streams, it creates new sources of inequality and instability.

At the same time, a small but growing body of literature investigates the possibility of the gig economy acting as a partial substitute for physical migration in the context of developing economies. Policy-oriented studies show that, through online freelancing and digital services export, it is possible for people to access incomes generated in another economy without physically migrating, thus reducing the push factors for migration (World Bank, 2019; Kathuria et al., 2019). Abstract: There is empirical evidence from South Asia on digital platforms enabling workers in certain sectors, such as information technology and creative services, to become part of global value chains with lower capital requirements than would have been possible in the absence of digitalization (Kathuria et al., 2019). Mehta and Kumar (2021) extend this by stating that, in the context of the COVID-19 pandemic, work on digital platforms has become a major source of income for dislocated workers, rather than merely a secondary source of employment.

The extent to which this was the case was contingent on the long-term viability of such opportunities, with income volatility, the absence of social support, and regulation acting as barriers to access as highlighted by many studies (World Bank, 2019). Our study suggests that the evidence from the current study highlights that although digital labour can reduce migration incentives within particular economic and structural contexts, this does not necessarily translate to the replacement of migration as a livelihood strategy.

The Gig Economy, in the context of Nepal The concept of the gig economy has also been a hot issue in Nepal. The main emphasis of the gig economy in the context of Nepal is the source of youth employment when the area of residence is urban or digitally connected. The concept of freelancing and work through the internet has allowed individuals to generate income and access the global market with the development of skills at relatively low skill levels (Khadka & Khadka, 2021; Parajuli, 2021). The platform of social media like Instagram also offers the possibility of entrepreneurial activity by helping individuals to develop their own personal brand, bypassing the constraints of the labour market (Maharjan & Gurung, 2020).

The opportunities available to this industry, however, are limited by certain structural constraints, such as limited access to international payment systems (e.g., PayPal), lack of regulatory clarity, and insufficient institutional support (Khanal & Khanal, 2023). Location-based gig work, such as ride-hailing services and food delivery services, has been studied in recent years. The studies on gig work, such as ride-hailing services and food delivery services, found that gig work is not sustainable despite generating income. These studies found that gig work is sustainable under specific conditions, such as

having a stable income stream and accessible payment systems, and is tragedy of the commons that heavily depends on institutional grounds.

Although there is a growing body of literature on digital labor, one significant area that is not addressed is how it affects migration-related decision-making. The literature on gig work in Nepal has largely focused on outcomes such as earnings, satisfaction, and use of gig work without considering that intention to migrate is an outcome variable (Paudel, 2022; Khanal, 2023).

This, in turn, is quite important as the intention to migrate acts as an important indicator of the migration ‘choices’ that would be made in the future, encompassing both the economic and socio-cultural dimensions. Further, despite the tremendous importance of understanding the relationship between digital labor and migration intentions in the context of the developing economies that are heavily dependent on migration, the empirical research in this area remains scarce.

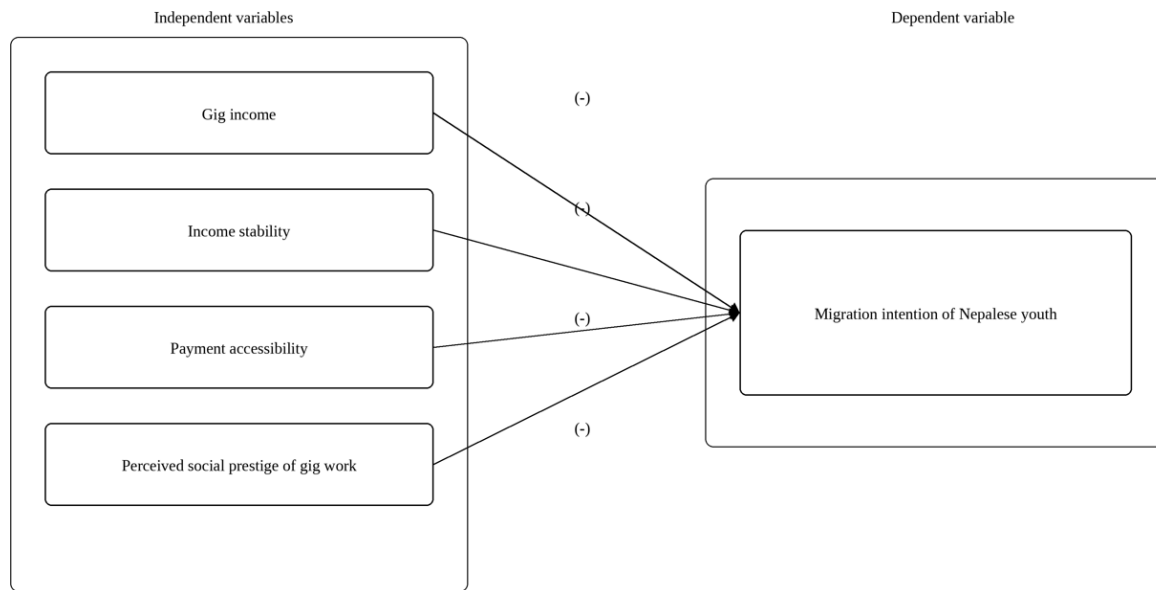
Based on the above theoretical and empirical findings, the present study attempts to conceptualize the migration intentions as being influenced by both the economic and socio-structural dimensions of gig work. The decrease in migration intentions, in turn, may also be attributed to the decrease in income-driven migration factors in the respective regions with the stabilizing income (scholarship) removing the uncertainties and risks associated with the local employment.

Payment accessibility refers to the system’s practicality in terms of maintaining digital work, especially in contexts with poor monetary infrastructure. Perceived social prestige was used as a measure for the socio-cultural variable, as it was recognized that migrants are not only motivated by monetary factors but also by social factors. The relationship between these variables and migration intention is primarily mediated through three factors, namely income substitution, risk minimization, and social legitimation of work in the digital space.

Conceptual Framework

The conceptual framework is constructed in a manner to illustrate the impact of gig economy participation on the migration intention among Nepali youths. According to the framework, gig income, income stability, payment accessibility, and perceived social status associated with gig work are considered independent variables, whereas migration intention represents the dependent variable. Arrows indicate the negative association between independent variables and migration intention. As such, migration intention declines when the income earned by youths through gig work improves, income stability increases, payment accessibility becomes easier, and social perception of gig work improves. The underlying assumption of this conceptual framework is the notion of the role played by digital labor in reducing pressures experienced traditionally as causes of migration. The assumption is that gig work does not eliminate migration, but complements it as an alternative livelihood strategy.

Hence, the conceptual framework captures the results indicated in the findings.



Source: Developed by author based on literature review specially prior study like Khadka & Khadka, 2021; Parajuli, 2021

With the aforementioned framework, the study proposes the following hypothesis: that higher gig income, higher income stability, better payment accessibility, and higher perceived social prestige of gig work will result in lower migration intention for Nepalese youth. Thus, the following four hypotheses are proposed:

H01: higher gig income relates negatively to migration intention;

H02: lower perceived income stability relates negatively to migration intention

H03: better payment accessibility results in negative relation with migration intention

H04: smaller perceived social prestige of gig work is associated negatively with migration intention.

Using correlation and regression analysis, these hypotheses are empirically tested, exploring the link between the gig economy and migration-related attitudes of urban youth. Gig income is the economic benefits of digital work, which is expected to influence migration intentions by reducing income-related push factors. Income stability is the consistency of earnings, which is an important aspect of economic livelihood decisions. Payment accessibility is the structural ease of receiving earnings, especially international remittances, which is crucial for the sustainability of the gig economy as a domestic employment form. Perceived social prestige is the socio-cultural acceptance of the gig economy, which is expected to influence migration intentions by affecting social acceptance and status-related aspects. The framework is based on the assumption that as gig income increases, income stability improves,

payment accessibility is better, and social prestige associated with gig work is more prominent, the migration intention is less. These assumptions are tested using correlation and regression analysis.

Research Methodology

This research will employ a quantitative cross-sectional study to examine the association of involvement in the online gig economy with migration intention among Nepalese youth. The quantitative method is appropriate for this study because the aim of the research is to quantify economic, structural, and socio-cultural variables that impact migration-related decision-making processes as well as to verify associations statistically between variables. Hence, quantitative survey-based research designs have been successfully used to examine digital labor participation, freelancing outcomes, and employment intentions in Nepal and other similar developing countries with informal poll work environments.

The data collection process for this quantitative research has taken place once, and this indicates the cross-sectional nature of the quantitative research approach employed in this study. Although our quantitative research approach has enabled us to achieve the examination of established relationships between variables, our quantitative approach does not allow us to establish cause-effect relationships as well as behavioral perseverance.

The target group is the Nepalese youth between the ages of 18 and 35 years. This is the active population that is involved in gig work and international migration. This group includes a large number of foreign employment applicants, international students, and gig workers in Nepal. In addition, the study includes online freelancing, gig work such as ride-hailing and online food delivery services, and youth who are planning to work in the gig economy. In terms of geography, the study is limited to Kathmandu Valley, Pokhara, and Chitwan. These are the most digitally connected and active cities in Nepal. This attention to the electronic employment market increases the applicability of the results. However, it is limited in the generalization of the results.

In the absence of an exhaustive sampling frame of gig workers in Nepal, the study utilized non-probability sampling methods by relying on the combination of both purposive and convenience sampling methods. The study participants were contacted via online platforms of freelance workers, social media, and online work platforms. The method is appropriate in the context of informal economy studies; however, it is likely that the study is subject to self-selection bias. Therefore, the findings of the study should not be generalized beyond the population of urban, connected youth in Nepal.

A total of 401 valid data points were obtained, which is deemed appropriate for multiple regression analysis, as it is well beyond the recommended threshold of at least 10 to 20 data points per independent variable, as recommended by various studies. With four independent variables, the study has the

statistical power needed to establish the significance of the relationships between the variables while increasing the precision of the regression estimates (25).

A structured questionnaire, keeping in view the purpose and intention of this study and previous literature on gig work, digital labor, and migration intention, has been used as a tool for primary data collection. Demographic factors, gig work type and duration, income earned from gig work on a monthly basis, income stability, access to receive income, social prestige, and migration intention were measured using the questionnaire. Migration intention has been measured as a composite dimension with multiple Likert-scale items related to the intention of the respondent to migrate, the pressure felt to search for foreign employment, and the belief that migration is essential for progress. All the responses were measured on a five-point Likert scale ranging from strongly disagree to strongly agree. Reliability analysis based on Cronbach's alpha has been used to check the reliability of the data. Results with alpha values higher than 0.70 are acceptable. However, even though reliability is an important aspect, without using factor analysis, it is not possible to prove the validity of the data, which is recognized as a limitation of the study.

The variable for the outcome is migration intention, with the independent variables being gig income, income stability, payment accessibility, and social prestige associated with gig work. Gig income was measured as self-reported income earned on a monthly basis, while the other variables were measured using multi-item Likert scales. Although demographic factors were also collected, such as age, gender, and education, these were not specified as control variables in the regression equation because, in this study, we are mainly concerned with factors related to the gig economy. This, in a way, was a limitation, especially for any other researcher, as it was indicated that demographic factors are required for the assessment of the results.

Data analysis was done using the Statistical Package for Social Sciences (SPSS). Descriptive statistics were used for describing the respondents, while Pearson correlation was used for establishing the nature and extent of the relationship between variables, as well as the direction and magnitude of the relationship. Multiple regression analysis was used for establishing the extent of the relationship between gig income, income stability, payment accessibility, social prestige, and migration intention. Statistical significance was determined at 5 percent.

The association of gig economy participation on migration intention is estimated through the following multiple linear regression model:

$$MI_i = \beta_0 + \beta_1(GI_i) + \beta_2(IS_i) + \beta_3(PA_i) + \beta_4(SP_i) + \epsilon$$

where MI_i represents migratory intention, GI_i denotes gig income, IS_i stands for income stability, PA_i represents payment accessibility, and SP_i denotes perceived social prestige. β_0 , β_1 , β_2 , β_3 , and β_4 are the

regression coefficients, and ε_i is the error term. The structure of the model has been specified for testing the association, not for testing the causation.

Although, it has been ensured that ethical concerns were maintained throughout the research process. It was voluntary, all participants were asked for their consent, and it was ensured that there was anonymity and confidentiality. No PII was collected, and it was used for scholarly purposes only.

Results

In this section, we report the findings based on the collected data from 401 participants. The demographic features, descriptive analysis, reliability analysis, correlation analysis, and regression analysis were arranged according to the study goals and hypotheses.

Demographic Profile of Respondents

Table 1

Demographic Characteristics of Respondents (N = 401)

Variable	Category	Frequency	Percentage (%)
Gender	Male	237	59.1
	Female	164	40.9
Age Group	18–24	148	36.9
	25–30	187	46.6
	31–35	66	16.6
Education	High School	56	14.0
	Bachelor	205	51.1
	Master	140	34.9
Location	Kathmandu	210	52.4
	Pokhara	96	23.9
	Chitwan	95	23.7

Source: SPSS

The sample is mildly male-dominated with 59.1%, but the figure is still significant with 40.9% representing females. The majority belong to the 25-30 years old group, accounting for 46.6%, followed by 36.9% belonging to the 18-24 years old group, suggesting that gig work is prevalent in this age group at their initial career life stage. Nepal is a relatively educated society with 86% having at least their bachelors degree, implying that this type of gig work is mostly preferred by educated individuals. From a geographical point of view, most of the sample were from Kathmandu, accounting for 52.4%, since this type of gig work is mostly available in this city due to existing digital infrastructure.

Descriptive Statistics of Study Variables

Table 2

Descriptive Statistics of Key Variables

Variable	Mean	Standard Deviation
Migration Intention	2.68	0.81
Gig Income	—	—
Income Stability	3.21	0.74
Payment Accessibility	3.05	0.77
Social Prestige	2.98	0.80

Source: SPSS

Table 2 indicates the results of the study in terms of descriptive statistics (Since gig income is a categorical variable, mean and standard deviation are not presented). The frequency table below illustrates the income levels, along with their frequency, presented separately. The average migration intention ($M = 2.68$) indicates that the level of interest for migrating, on average, is moderate. Income stability ($M = 3.21$) has the highest mean for the results of the independent variable, implying that the perceptions towards the predictability of income are relatively positive. The presence of payment accessibility ($M = 3.05$) and social prestige ($M = 2.98$) is moderate, implying that the support for gig work, in terms of structure and social culture, is present but not as much as it could be. The results indicate that, although gig work offers certain advantages, it offers only a certain level of stability and social prestige, which could be used as factors for migrating.

Reliability Analysis

Table 3

Reliability Statistics of Measurement Scales

Construct	Number of Items	Cronbach's Alpha
Migration Intention	5	0.82
Income Stability	3	0.78
Payment Accessibility	3	0.79
Social Prestige	3	0.74

Source: SPSS

All the constructs show satisfactory internal consistency, as the values of Cronbach's Alpha are higher than the recommended 0.70 threshold. The highest reliability coefficient, 0.82, was found in the migration intention construct, proving that the scales are reliable for subsequent statistical analysis.

Correlation Analysis

Table 4

Pearson Correlation Matrix

Variables	1	2	3	4	5
1. Gig Income	—				
2. Income Stability	.53**	—			
3. Payment Accessibility	.41**	.38**	—		
4. Social Prestige	.32**	.29**	.27**	—	
5. Migration Intention	-.29**	-.31**	-.24**	-.27**	—

Note: $p < .01$ (2-tailed)

Source: SPSS

The findings reveal that all independent variables have a significant negative correlation with migration intention at the 1% level of significance. Gig income has a moderate negative relationship with migration intention, with a value of $r = -0.29$, supporting hypothesis 1. Income stability has the highest negative correlation with migration intention, with a value of $r = -0.31$, supporting hypothesis 2, which implies that the predictability of earnings is a crucial factor in determining migration attitudes. Payment accessibility has a negative correlation with migration intention, with a value of $r = -0.24$, supporting hypothesis 3, while hypothesis 4 is supported by the negative correlation between social prestige and migration intention, with a value of $r = -0.27$.

Regression Analysis

Table 5

Model Summary

Model	R	R ²	Adjusted R ²	Std. Error
1	0.49	0.24	0.22	0.61

Source: SPSS

The model predicts 24% of the variance in migration intention ($R^2 = 0.24$), which indicates a moderate explanatory power of the model. This shows that the role of the gig economy is important, although migration intention is affected by other variables as well.

Table 6
ANOVA Results

Model	SS	df	MS	F	Sig.
Regression	41.29	4	10.32	27.62	.000
Residual	130.11	396	0.33		
Total	171.40	400			

Source: SPSS

The regression model is statistically significant ($F = 27.62$, $p < .001$), indicating that the independent variables collectively explain variation in migration intention.

Table 7
Regression Coefficients

Predictor	B	SE	β	t	Sig.
Constant	3.87	0.18	—	21.50	.000
Gig Income	-0.002	0.001	-0.24	-4.98	.000
Income Stability	-0.27	0.05	-0.31	-5.40	.000
Payment Accessibility	-0.21	0.06	-0.19	-3.50	.001
Social Prestige	-0.18	0.07	-0.17	-2.71	.007

Source: SPSS

Based on the regression analysis, it is clear that the independent variables are statistically significant predictors of migration intention, with income stability having the most significant effect on migration intention, followed by gig income, as shown by the regression coefficients of -0.31 and -0.24, respectively. These findings suggest that the predictability of income, as well as the actual level of income, play an important role in determining migration-related attitudes.

Therefore, the hypotheses of this study, namely, the effect of payment accessibility, the effect of social prestige, the effect of gig income, and the effect of income stability, on migration intention, are

confirmed by the regression analysis, as shown by the regression coefficients of -0.19, -0.17, -0.24, and -0.31, respectively.

The negative signs of the regression coefficients of the independent variables indicate that the independent variables, namely, gig income, income stability, payment accessibility, and social prestige, are negatively related to migration intention, with the level of these independent variables having a direct effect on the level of migration intention, with the findings of this study suggesting that these independent variables, namely, gig income, income stability, payment accessibility, and social prestige, play an important role in determining migration intention, with

Discussion

The present study examined the factors related to the economic, structural, and socio-cultural aspects of gig economy participation and migration intention in the case of Nepalese youth. However, the results of the study must be viewed with caution in the context of the cross-sectional nature of the study.

The demographic characteristics of the respondents indicate that the gig economy is more prominent in the lives of younger, educated, and urban Nepalese youth. These findings are consistent with previous studies that have indicated that educated youth are the primary participants in online gig economy work (Khadka & Khadka, 2021; Parajuli, 2021). In addition, the lower percentage of respondents engaging in formal foreign employment practices, such as applying for a No Objection Certificate, may indicate that digitally connected Nepalese youth are more focused on short-term gig economy work. However, this may not indicate that migration intention is low; instead, it may indicate that migration intention is shifting.

Moreover, these correlation results also show that there is a significant negative relationship between gig income and migration intention. This suggests that an increased dependence on digital income is correlated with low migration intention. This is consistent with regional results that suggest access to non-local or globally sourced income streams could help alleviate traditional economic migration drivers (Kathuria et al., 2019; Mehta & Kumar, 2021). However, it must also be noted that these results suggest migration intention is still a multifaceted construct driven by both economic and non-economic drivers.

In terms of income stability being the most significant predictor of migration intention, this suggests that income stability is more important than other economic drivers. In the Nepalese context, foreign employment is often considered an income source that provides stability despite the risks involved. In this regard, it appears that gig income has the highest impact on migration intention when it provides income stability. This is consistent with existing literature that suggests income stability is an important limitation of platform work (Altenried, 2019; ILO, 2021). This also aligns with existing research

conducted in Nepal that suggests income stability is an important driver of freelancer satisfaction (Khadka & Khadka, 2021).

The accessibility of payment also has a significant negative relationship with migration intention. This is particularly important in the context of Nepal, as constraints on international payment systems and foreign currency transactions are still significant. Earlier studies on this issue identified this as one of the critical challenges to sustaining digital labor (Parajuli, 2021; Khanal & Khanal, 2023). The findings in this study indicate that improving payment systems can improve the viability of gig work as a livelihood strategy, thereby reducing the need to physically migrate.

Besides economic and structural factors, socio-cultural factors such as social prestige are also important. In the case of Nepal, migration has been linked with social mobility and prestige. However, the negative relationship between the social prestige of gig work and migration intention indicates that an improvement in the social validity of digital work may reduce migration intention. This is consistent with the sociological view that migration decisions are influenced by factors other than rational calculations, such as social identity and status.

The analysis also points to the heterogeneity in different forms of gig work. Individuals in online freelancing and creative digital work have lower migration intentions than individuals in location-based gig work such as ride-hailing and food delivery. This is an important theoretical distinction, as online freelancing connects workers with the global market, representing a form of ‘virtual mobility’ that is independent of geographic constraints (Graham & Anwar, 2019). In contrast, location-based gig work is subject to local economic conditions with limited differentiation from traditional employment, rendering it of little influence on migration intentions. Gender differences were also noted in the study, with women showing significantly lower migration intentions compared with men, which may be explained by various socio-cultural constraints, as well as differences in perceptions of risk when engaging in foreign employment. On the other hand, the rise of digital gig work may provide women with socially acceptable employment options, although this is purely speculative at this point of analysis and is recommended as an area of qualitative exploration.

Overall, this study has extended the conventional push-pull migration models by taking into consideration the impact of digital labor on migration. While gig economy participation can act as a partial replacement for some economic pull-push factors, it cannot act as a complete replacement. The limited explanatory power of this model suggests that migration is influenced by a wide range of factors. As suggested by theories on digital labor and platform capitalism, online labor may act as a parallel rather than a replacement to physical migration.

Conclusion

This study aimed to examine the socio-cultural, economic, and structural aspects of the Nepalese youth migration intention of the online gig economy. The findings revealed that the gig economy was negatively correlated with the migration intention, especially when the individual is experiencing stable income, accessible payment, and positive social perceptions of the digital economy. One of the aspects that were included in this study was the stability of the income, which was the most powerful predictor that not only the amount of the income was essential, but the stability of the income was even more important.

Theoretically, the study contributes to migration theory by indicating that certain traditional economic push factors have been diminished (though only in part) because of digital labor; however, not all factors related to broader migration motivations are eliminated. This is in keeping with some emerging conceptualizations of “virtual migration,” in which people are part of global labor markets without physical migration. However, the results also suggest that the extent and reach of gig work are conditional and one-sided. Not all gig work types are created equal; legitimate forms of contract work related to global markets, such as freelancing, may be more effective in modulating migration intention than the same forms of work in local markets.

However, despite all these positives, there are some limitations associated with this study. First, this study is based on a cross-sectional study that cannot be used to make causal inferences. Additionally, this study is based on non-probability sampling, which is limited to metropolitan and digitally literate individuals. Finally, this study’s low explanatory power suggests that migration intention is influenced by various aspects such as social networks, long-term career aspirations, and global wage differentials that were not captured by this study.

Overall, this study suggests that there is a potential for interlinking the gig economy with international migration. The gig economy is not a replacement for international migration, at least not in terms of common perceptions. Nevertheless, this study suggests that it is a complementary alternative that reorders migratory aspirations depending on various factors. The study suggests that future studies should explore this issue more using longitudinal studies on how the gig economy is associated with migration in various economies in the global south.

References

- Alberti, G., & Però, D. (2018). *Migrating industrial relations: Migrant workers, labour segmentation and the role of unions*. Palgrave Macmillan.
- Altenried, M. (2019). On the last mile: Logistical urbanism and the transformation of labour. *Work Organisation, Labour & Globalisation*, 13(1), 114–129. <https://doi.org/10.13169/workorglaboglob.13.1.0114>

- Graham, M., & Anwar, M. A. (2019). The global gig economy: Towards a planetary labour market? *First Monday*, 24(4). <https://doi.org/10.5210/fm.v24i4.9913>
- International Labour Organization. (2021). *World employment and social outlook 2021: The role of digital labour platforms in transforming the world of work*. ILO.
- Kathuria, R., Kedia, M., Varma, G., & Bagchi, K. (2019). *The future of work in India: Inclusion, growth and transformation*. World Economic Forum.
- Khadka, S., & Khadka, B. (2021). Opportunities and challenges of freelancing in Nepal. *Journal of Management and Development Studies*, 31(1), 45–58.
- Khanal, D. R. (2023). Digital employment and youth labour participation in Nepal. *Economic Review*, 35(2), 67–84. Nepal Rastra Bank.
- Khanal, D. R., & Khanal, S. (2023). *Financial infrastructure and digital labour markets in Nepal* (NRB Working Paper No. 23–05). Nepal Rastra Bank.
- Maharjan, S., & Gurung, A. (2020). Youth employment and labour migration trends in Nepal. *Tribhuvan University Journal*, 34(1), 1–18.
- Mehta, A., & Kumar, R. (2021). Platform work and labour mobility in South Asia. *Indian Journal of Labour Economics*, 64(3), 623–641. <https://doi.org/10.1007/s41027-021-00309-7>
- Paudel, N. P. (2022). Digital economy and employment transformation in Nepal. *Journal of Development and Administrative Studies*, 30(2), 23–39.
- Parajuli, R. (2021). Online freelancing as an emerging employment opportunity for Nepali youth. *South Asian Journal of Social Studies and Economics*, 11(4), 1–12. <https://doi.org/10.9734/sajsse/2021/v11i430298>
- van Doorn, N., Ferrari, F., & Graham, M. (2021). Migration and migrant labour in the gig economy: An intervention. *Work, Employment and Society*, 35(2), 380–388. <https://doi.org/10.1177/0950017020955697>
- World Bank. (2019). *World development report 2019: The changing nature of work*. <https://documents1.worldbank.org/curated/en/816281518818814423/pdf/2019-WDR-Report.pdf>

Career Development and Employee Retention: Addressing Brain Drain in Nepal

Jyoti Silal (Assistant Lecturer, Brixton College, Nepal)

How to Cite

Silal, J. (2026). Career Development and Employee Retention: Addressing Brain Drain in Nepal. *Brixton Scholarly Review*, 3(01), 84–104. <https://doi.org/10.3126/bsr.v3i01.93453>

Abstract

Another challenge facing Nepal is brain drain, especially among skilled and professional groups, which negatively impacts organizational and HRD building. Although most research deals with economic push and pull factors, little research explores how

internal HR practices affect brain drain intention among employees. This study aims to examine whether opportunities for career development, such as training quality, mentoring support, and clarity in promotion opportunities, reduce brain drain intention among skilled and professional groups in Nepal. The study also tests whether job satisfaction and affective commitment act as mediating factors in this relationship and whether perceived foreign opportunities reduce these relationships. A quantitative explanatory research design was used for this study. Primary data was collected from 300 skilled and professional groups in banking, ICT, healthcare, higher education, and manufacturing industries. The analysis was conducted using descriptive statistics, correlations, regression analysis, and bootstrapped mediation and moderation tests. The results indicated that good opportunities for career development enhance job satisfaction and affective commitment. These two factors reduce the intention to migrate abroad. However, attractive foreign job opportunities reduce this protective effect. The study concludes that brain drain intention in organizations can be reduced through the establishment of transparent promotion systems, mentoring, and skill-oriented training.

Keywords: Brain drain, Career development opportunities, Job satisfaction, Affective commitment, Employee retention, Nepal

Introduction

Many a morning in Nepal is like this: families are saying their goodbyes, a nurse is off to the UK, an engineer is surfing the internet for job opportunities abroad, and a security guard is getting ready for work in the Gulf. Such a scene is not an isolated occurrence but rather a part of a larger phenomenon often termed a brain drain. The problem, as early research suggested, is a loss of human capital as the country's pool of talented and trained people diminishes, causing a slowdown in the country's learning and growth process (Watanabe, 1969).

Yet the problem is not just a macro-level issue but is also a micro-level concern in the workplace, where the employee is often uncertain about career progress, mentoring opportunities are lacking, and the promotion process is unclear. Research on the subject of international migration suggests that the flow of skilled workers is not just driven by wages but is significantly influenced by the responses of these

individuals to credible career opportunities, job recognitions, safety, and the expectation of career progress (Gibson and McKenzie, 2011; Bhardwaj and Sharma, 2022).

Similar structural issues have been highlighted in other research undertaken in Nepal. Issues such as poor career prospects, few advanced positions, lack of investment in research and development, and unclear managerial practices have been highlighted as issues. These issues exert pressure that prompts individuals to seek opportunities elsewhere (Poudel and Shrestha, 2024; Pokhrel et al., 2025).

Another issue that has been highlighted is the use of appropriate terms. It has been highlighted that the real problem faced by Nepal is that of labour drain as opposed to brain drain. The reason for this is that many low and semi-skilled labourers emigrate to other countries. However, the loss of skilled manpower is still of great concern in areas where such skills are rare (A. Dahal, 2024). The lack of skilled labour in hospitals, universities, engineering companies, and financial institutions is of great concern.

Studies have revealed that the intention to migrate is a function of work experience in the workplace. Employees are likely to be dissatisfied and have a stronger intention to migrate when they do not see opportunities for advancement and learning in the workplace. The organizational factors that are likely to keep the employees despite the availability of opportunities elsewhere include career development and management support.

Several empirical studies have been done on the subject. Research among Nepali youth revealed that the intention to migrate increases when the migrant population perceives strong economic benefits in the host country, has higher educational qualifications, and has family links in the host country (Joshi and Dahal, 2024). Among information technology experts, the intention to migrate is influenced by career aspirations and lack of opportunities in the local job market (Jha et al., 2024).

Evidence of this can also be seen in the health sector. A large number of nurses have strong intentions to migrate to other countries because of the poor career development systems and lack of professional growth opportunities within their own domestic hospitals. The lack of mentoring and growth opportunities can lead to strong intentions to migrate (Sandha & Shrestha, 2025). Sector-level research in the health and education sectors confirms that providing career development systems and training can reduce the intention to migrate more than salary increments (Giri et al., 2025; Pokhrel et al., 2025).

Economic theory also supports the macro-level effects of skilled migration. The human capital model of economic growth shows that if educated and skilled personnel migrate to other countries, it can affect the long-term economic growth of their own country. Unless domestic systems can increase the quality of education and career growth opportunities, economic growth may slow down (Wong & Yip, 1999). The above economic theory can also guide the macro-level effects of providing career growth systems in domestic organizations. Even if domestic systems and policies take time to implement changes, each organization can make use of its own career growth systems.

Though much discussion is given to the push and pull factors for migration, little research in Nepal explores how organizational practices affect brain drain intention through psychological factors. Much research identifies push and pull factors for migration but does not test how certain HR practices affect employee attitudes and migration intentions. Systemic reviews suggest that certain bundles of HR practices, including mentoring, development opportunities, work-life balance, and supportive leadership, should be explored instead of salary alone (Abasilim and Obozekhai, 2024). Other research points to the significance of cultures in the work environment that are based on trust, recognition, and fairness (Baral, 2023). However, how career development opportunities affect migration intention through job satisfaction and affective commitment remains under-explored in Nepali work contexts.

It is unlikely that the decision of the employee to migrate is influenced by a single factor. The decision is a gradual process influenced by the employee's daily work experience. Training programs that do not translate into greater responsibility are a source of frustration. Decisions on promotions that are arbitrary are a source of low employee trust in the organization. Limited opportunities in project leadership are a source of discouragement among ambitious employees. The opposite of these factors is a source of employee satisfaction and emotional attachment to the organization.

Studies on international students have indicated that support in adjusting, professional opportunities, and career prospects are significant in the decision of graduates to return to their home countries or stay in the host country (Baruch et al., 2007). The supportive mechanisms in the organizational context are mentoring systems, professional training, and promotion opportunities.

This study will look into these issues in the context of Nepali organizations. It will focus on skilled employees working in the banking industry, information technology, hospitals, universities, and manufacturing. The research question will be: Does the presence of credible career development prospects affect the intention of employees to seek work abroad? It will look into the following aspects: the quality of training, mentoring or sponsorship, and promotion practices and their effects on the intention of employees to migrate abroad through two major psychological processes: job satisfaction and affective commitment.

The research also takes into consideration the fact that the organizations are functioning in a global labor market. Foreign employment opportunities may seem attractive due to the higher salary, technology, and the international environment. Therefore, the research will also look into the perceived foreign opportunity attractiveness as a moderator. It is believed that if the employees are highly convinced that foreign employment opportunities are accessible and attractive, the relationship between satisfaction and commitment and migration intention may be weakened, but it may not be completely eliminated.

The research will seek to answer four questions. First, does the presence of more career development opportunities reduce the intention of brain drain? Second, does job satisfaction and affective

commitment mediate the relationship between career development opportunities and migration intention? Third, does perceived foreign opportunity attractiveness moderate the relationship between the two variables? Fourth, does the relationship exist even when controlling for pay fairness and work-life balance?

This study makes both theoretical and practical contributions. The theoretical contribution of this study is that it links human resource development practices to migration decisions through affective factors such as satisfaction and commitment (Baral, 2023; Abasilim & Obozekhai, 2024; Giri et al., 2025; Gibson & McKenzie, 2011; Watanabe, 1969).

Practically, this study can help organizations that seek to retain their human resource. Organizations can use promotion systems that are transparent and training programs that can help increase the commitment of their human resource to the organization. These can help organizations respond to the global phenomenon of brain drain.

The problem remains complex. Nepal is experiencing both labor drain and brain drain, and both issues are posing different policy challenges for the country (A. Dahal, 2024; Poudel and Shrestha, 2024). However, at the organizational level, this process is immediate and visible. Trained professionals stay in places where growth is felt to be possible and fair. Career growth systems that offer credible growth opportunities may influence whether individuals are building their future at home or looking for opportunities elsewhere.

Literature Review

As the country's "cream of the crop" emigrates, skills cease to add up and what appears is decay in human capital growth: from there, growth ends unless a counter-effect is found to increase the learning capacity. (Watanabe, 1969; Wong and Yip, 1999). This effect was first detected in key trades and publicly faced human capital formation by the earliest inter-country studies, and the growth models made this mechanism: Unless the effect of the increase in educator-student ratios is offset, brain drain will mean that the long-term growth path of skills and production also declines.

Nevertheless, decisions to migrate are not often influenced by wage considerations. Recent syntheses on the subject show that decisions to migrate skilled individuals are influenced by opportunity maps that include career progression, learning, research facilities, fairness, and safety and not wages (Gibson & McKenzie, 2011; Bhardwaj & Sharma, 2022). Organizations that make growth salient, like role training and sponsorship, help to alleviate outward intentions because they touch the affective bases that individuals feel.

In the case of Nepal, the push-pull texture is ongoing. The push factors include the texture of job ladders, wage ceilings, political insecurity, curriculum financing, and R&D ceilings, while the pull factors include higher wages, career clarity, safety, and qualifications (Poudel & Shrestha, 2024; Pokhrel,

Singh, & Lamichhane, 2025). The youth evidence shows that migration intentions are positively associated with the economic benefits, education level, and family ties of the destination country (Joshi & Dahal, 2024).

Amongst IT workers, intention to emigrate correlates with employment prospects, economic development, education, and personal aspiration, reflecting aspiration thwarted by lack of internal opportunities (Jha, Thakur, Nepal, Chhetri, & Bhandari, 2024). Similar findings are seen in syntheses in the health sector, which also offer HR specialists an edge: career prospects, supervisory support, and safety are key correlates for lower intention to emigrate (Giri et al., 2025). Brain drain vs. labour drain: some suggest the latter is more significant in sheer numbers, but evidence in both sectors indicates brain drain is significant where it occurs (A. Dahal, 2024).

Evidence from hospitals is stark: for nurses, intention to emigrate is extremely high, and exposure to career development and perceptions of favoritism and safety are extremely low (Sandha & Shrestha, 2025).

What is needed is a factory setting in which the voices of all employees receive equal time, appreciation, encouragement and hand-holding trust, as well as the desire to forge ahead together and achieve success in one's own life (Baral, 2023). HRM practices as such may be necessary to promote pro-safety behavior (Monzani, et al., 2023; Hrebiniak, 2020). Development forums and career counseling services for training programs help employees achieve career goals while also sharpening their skills in new subjects at no cost (Brisque & Herbert, 2025). In the end, the only real career is one that gives both job satisfaction and allows you to move upwards (Ezzamel & Stone, 2017). The natural development path at 'home' – really a reference back to one's country of origin. The direction is clear-cut: exercise comfortable non-stage jobs job satisfaction → affective commitment (Ezzamel & Stone, 2019). This is well theorized in adjacent literature. When people feel supported, fit in, and on course, intention to stay rises (Baruch, Budhwar & Khatri, 2007). Translate to original-country businesses and the way is simple: career development opportunities → affective commitment & job satisfaction → intention to emigrate down evidence from twice-daily emigration talks 9 with Nepalese fellow workers overseas confirms that emigrants do not generally want to 'cut off'. Where they have no way to go back' in Nepal, they become yearning migrants; where their new skills are kept up overseas and rewarded for use, they choose to remain abroad (Silwal, 2019).

Reviews with a focus on higher education institutions extend the push factors to include underfunded programs, outdated labs, and underdeveloped research environments, with modernization and career laddering serving as the solution. However, a critical boundary condition is the severity of foreign opportunity. For students and young professionals, the strength of the foreign labor market, ease of adjustment, and support networks all consistently contribute to staying abroad, regardless of push factors (Baruch et al., 2007; Pokharel, Pandey, & Dahal, 2024). Similarly, youth research conducted in

Nepal suggests family networks and economic opportunities in foreign countries contribute to migration intention. What does this suggest for organizational research? In moderation, not magic, career development effects on satisfaction and commitment will be mitigated by the severity of foreign opportunity.

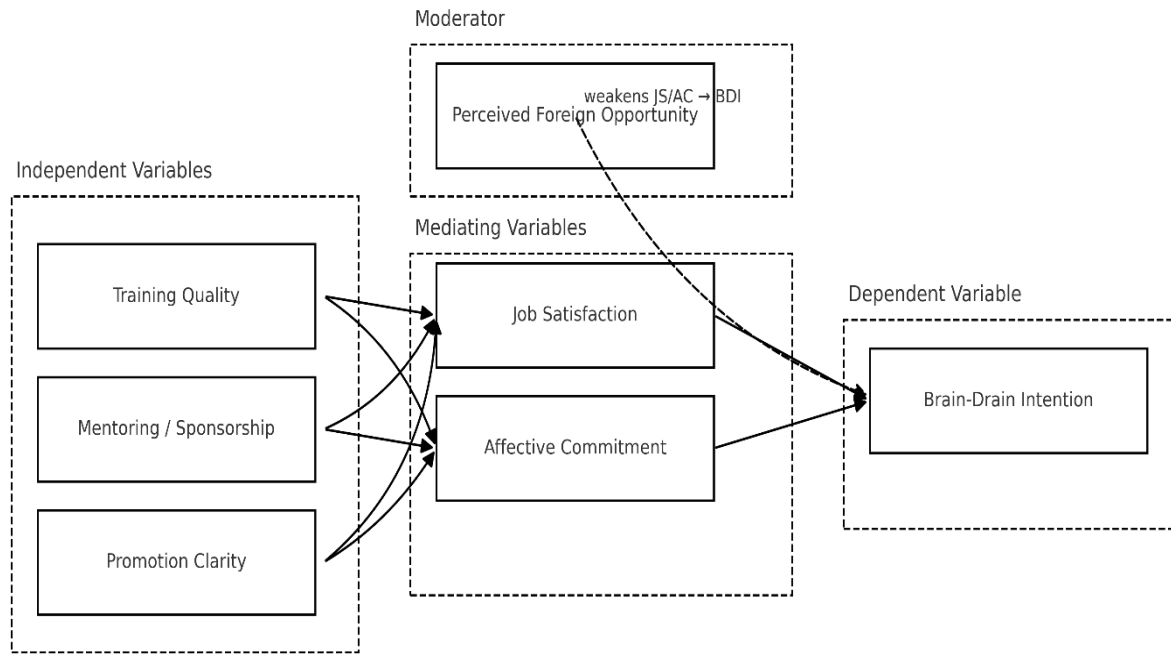
Finally, two points from the editorials bring the seriousness of the issue into perspective. On one hand, we are reminded that remittance does not provide a perfect substitute for skill loss, as the loss of expertise cannot be made up for financially (Mishra, 2023). On the other, the case work from the city level reinforces the need for local career paths that are deemed worthwhile, despite the wait, as a way of mitigating the costs of exit (Panta, 2025).

Synthesis and gap. Through these various approaches, the literature provides support for the following four hypotheses, which can be tested at the level of Nepali organizations: (a) career development opportunities, including aspects of training quality, mentoring or sponsorship, and promotion, should have a positive relationship with job satisfaction and affective commitment; (b) job satisfaction and affective commitment should have a negative relationship with emigration intention; (c) the indirect relationship from career development opportunities to emigration intention, via job satisfaction/affective commitment, should be significant; and (d) the presence of foreign opportunity should attenuate, rather than negate, the above protective relationship (Abasilim & Obozekhai, 2024; Baral, 2023; Baruch et al., 2007; Giri et al., 2025; Joshi & Dahal, 2024).

This is precisely the link that this study seeks to address through the organization-level, Nepal-based test of the model: CDO -> satisfaction/commitment -> brain drain intention, contextualized within the constraint of external pull.

Conceptual framework

The model suggests that career development opportunities within the firm, namely the quality of training, mentoring/sponsorship, and promotion, influence employees' satisfaction with and affective commitment to their job and firm. The stronger these opportunities, the greater satisfaction and commitment; and as satisfaction and commitment go up, so does the intention to leave the country for another job decrease. Note, however, that the outside world is indeed pulling, so we also include foreign opportunity as a moderator: if this is high, the relationship between satisfaction/commitment and emigration intention will be weaker, though not zero. So, the model is: CDO → (Satisfaction, Commitment) → Brain-Drain Intention.



Controls (in analysis, not drawn): Pay fairness, Work-life balance, Age, Tenure, Sector

Source: Developed by author by taking inspiration from past research done by Babin, & Anderson, 2019; Hayes, 2018

Methodology

The research design of the present study employed a quantitative, descriptive, and explanatory approach to examine the influence of career development opportunities (CDO) on brain drain intention (BDI) of skilled employees of Nepalese organizations. The descriptive approach of the study helped the researchers understand the demographic profile of the respondents, whereas the explanatory approach of the study helped the researchers examine the theorized relationship between brain drain intention, where job satisfaction (JS) and affective commitment (AC) mediate the influence of career development opportunities, and the influence of perceived foreign opportunity (PFO) weakens the moderating role of JS and AC. The researchers employed a structured survey approach because it best suits the best practices of testing directional hypotheses of HR-related constructs with the help of scales and process models (Hair, Black, Babin, & Anderson, 2019; Hayes, 2018; Nunnally & Bernstein, 1994). The present study follows the social exchange theory, wherein employees, after being provided with career development opportunities, show higher levels of job satisfaction and affective commitment, thereby reducing the intention of brain drain.

The target population for data collection was full-time, skilled employees working in banking/finance, ICT, health, higher education, and manufacturing sectors in Nepal. Since a sampling frame was not available, access to the target population was based on a stratified approach by sector and province.

This is similar to other applied HRM studies, in which access to specific employee subgroups is critical. The planned sample size for data collection was $n = 300$ usable responses. This is based on general recommendations for a minimum sample size for a structural model with several constructs and interaction effects, which is necessary for adequate statistical power to detect small to medium-sized mediation and moderation effects in bootstrapping analyses (Hair et al., 2019). Data collection was conducted over a period of approximately 4-6 weeks using an online survey approach. The first page of the survey contained a consent form indicating the purpose of the study, anonymity, voluntary participation, right to withdraw from the study, and estimated completion time of 12-15 minutes. Non-monetary incentives were minimal, such as a summary of general findings. Quotas were kept for sectors to prevent dominance by a single industry.

For collecting primary data, a structured questionnaire was used, while secondary data in the form of peer-reviewed articles, books, and policy reports were used for constructing the constructs and discussing the findings. The questionnaire was modified according to Nepali context requirements and translated into Nepali. It was also translated back into English to check for semantic equivalence. The questionnaire was also pre-tested using around 30-40 participants from at least two industries to check for clarity and time required to fill out the questionnaire. Items that scored low on item-total correlations and items scoring below .70 on Cronbach's alpha were modified or dropped according to recommendations in Nunnally and Bernstein (1994) and Hair et al. (2019). The final questionnaire includes demographic questions such as age group, gender, education, tenure, job level, sector, province, and city types. It also includes two control items: pay fairness and work-life balance. The main constructs are also included in five-point Likert scales ranging from 1-5, where 1 stands for strongly disagree and 5 stands for strongly agree. CDO was also measured using three related constructs with four items each: training quality, mentoring/sponsorship, and promotion clarity.

The four items of JS measured global job satisfaction and those of AC measured affective belongingness. PFO was comprised of four items capturing attractiveness and perceived attainability of overseas job opportunities; BDI was comprised of four items measuring the plans to apply for or relocate to another country in 12-24 months.

The reliability and validity tests were conducted through standard and established approaches. For reliability, internal consistency was examined through Cronbach's alpha and composite reliability, each with results higher than or equal to 0.70. For convergent validity, standardized loads were examined, with each having to be equal to or higher than 0.60, and an average variance extracted with results equal to or higher than 0.50. For discriminant validity, the HTMT approach was used, with results equal to or lower than 0.85, while this was further confirmed through the Fornell-Larcker approach as recommended by Hair et al. (2019). To mitigate common method biases, procedural remedies were employed, such as presenting items in grouped scale formats. Other tests included Harman's single

factor test and the latent method factor test. The rules for data cleaning were as follows: responses with at least 90% completion and passing an attention check were included, while responses were excluded if linear, too quick, or with multivariate outliers. In instances where missing data were 5% or less and missing completely at random, maximum likelihood estimation and EM imputation were used.

Data analysis was conducted using SPSS (Version 27) and AMOS/lavaan or equivalent software for structural equation modeling. Descriptive statistics, including means, standard deviations, and frequency distributions, were used to describe the variables of interest. Confirmatory Factor Analysis (CFA) was used to analyze the measurement model of the three facets of CDO, including the second-order factor of CDO, JS, AC, PFO, and BDI. The goodness of fit of the measurement model was ascertained using multivariate standards, including χ^2/df , CFI, TLI, RMSEA, and SRMR, all set at $\leq .08$. Structural modeling: The structural model was used to analyze the direct relationships between the facets of CDO and JS, AC, as well as the indirect relationships, using bias-corrected bootstrapping with 5,000 bootstrap samples (Hayes, 2018). In the structural model, the control variables were pay fairness, work-life balance, age, tenure, and sector. Moderating role of PFO: To ascertain the moderating role of PFO, the variables JS, AC, and PFO were mean-centered, and the interaction term of JS x PFO and AC x PFO were computed. Simple slope analysis at 1 SD above and below the mean of PFO was conducted. The hypotheses were set at 5% significance, i.e., $p < .05$. However, all indirect and interaction effects were ascertained at the 95% confidence intervals.

The capital structure can then be evaluated on this theoretical basis. More specifically, in times when the relevance of foreign opportunities is at its peak, an important question arises: does appreciation for the advancement of career development systems within the organization outweigh intentions to migrate? Also, does this dynamic change with the availability of attractive options abroad compared to those at home? The underlying studies were based on variable-related analyses, which are crucial for the business world. Reflecting both quantitative explanatory inquiry, validated scales and bootstrapped mediation-moderation analysis helped to provide findings that is actionable for decision makers and replicable by Nepali employers. Further, it meets modern theory and methodological standards for HRM and organizational behavior research such as those of Hair et al. Hayes (2018) and Nunnally & Bernstein (1994).

Regression Model Specification

$$\begin{aligned}
 JS &= \alpha_0 + \alpha_1 CDO_T + \alpha_2 CDO_M + \alpha_3 CDO_P + \alpha_c' \text{Controls} + \varepsilon_1 \\
 AC &= \gamma_0 + \gamma_1 CDO_T + \gamma_2 CDO_M + \gamma_3 CDO_P + \gamma_c' \text{Controls} + \varepsilon_2 \\
 BDI &= \beta_0 + \beta_1 JS + \beta_2 AC + \beta_3 PFO + \beta_4 (JS \times PFO) + \beta_5 (AC \times PFO) + \beta_c' \text{Controls} + \varepsilon_3
 \end{aligned}$$

Where:

CDO_T = Training quality; CDO_M = Mentoring/sponsorship; CDO_P = Promotion clarity;

JS = Job Satisfaction; AC = Affective Commitment; PFO = Perceived Foreign Opportunity;

BDI = Brain-Drain Intention (dependent variable);

Controls= Pay fairness, work–life balance, age, tenure, sector;

ε = Error terms.

Results

In this section, the findings will be presented in a step-by-step manner, with the inclusion of SPSS-formatted tables and interpretations. The presentation will start with the sampling profile, followed by the establishment of the reliability and factorability of the measurements. Then, the presentation will show the results of the means, standard deviations, and correlations to validate the expected findings. The main findings will then be presented, with the direct effects of the model, followed by the bootstrapped mediation and moderation effects. The presentation will start with “Table X shows....” and will include a simple and applicable interpretation.

Table 1

Frequencies and Percentages: Sample Profile (N = 300)

Variable	Category	n	%
Gender	Male	174	58.0
	Female	124	41.3
	Other/Prefer not say	2	0.7
Age (years)	20–29	72	24.0
	30–39	138	46.0
	40–49	66	22.0
	50+	24	8.0
Education	Bachelor’s	156	52.0
	Master’s	120	40.0
	MPhil/PhD	24	8.0
Tenure	0.5–2 yrs	64	21.3
	3–5 yrs	98	32.7
	6–10 yrs	92	30.7
	11+ yrs	46	15.3
Sector	Banking/Finance	62	20.7
	ICT	60	20.0
	Health	60	20.0
	Higher Education	58	19.3
	Manufacturing	60	20.0
Province	Koshi	42	14.0

Madhesh	36	12.0
Bagmati	108	36.0
Gandaki	36	12.0
Lumbini	36	12.0
Karnali	24	8.0
Sudurpaschim	18	6.0

Source: SPSS

The study utilizes 300 participants as presented in Table 1 below. The study subjects have been derived from a well-balanced mix of sectors and provinces. The age group of 30-39 years is dominant in this study, contributing 46% to the total number of subjects. The educational level of the subjects is also well represented; 52% of the subjects have at least a bachelor's degree, and 40% have a master's degree. The subjects can thus be regarded as "skilled employees." The subjects have also been well represented in terms of their years of experience. A total of 63% have 3-10 years of experience within the organization. Therefore, they have enough ground to talk about their career development. The subjects have also been well represented in terms of sectors. A total of 20% of the subjects have been selected from each sector. Thus, no sector is dominant in this study; it is neither health nor ICT. The subjects have also been well represented in terms of their provinces. A total of 36% of the subjects have been selected from Bagmati Province because of the national headquarters.

Table 2

Reliability Statistics (Cronbach's α) and Item Diagnostics

Construct (items)	α	Mean item-total r	Range " α if item deleted"
CDO–Training (4)	.88	.61	.84–.88
CDO–Mentoring/Sponsorship (4)	.90	.66	.87–.90
CDO–Promotion Clarity (4)	.87	.59	.83–.87
Job Satisfaction (4)	.86	.58	.82–.86
Affective Commitment (4)	.89	.64	.86–.89
Perceived Foreign Opportunity (4)	.85	.56	.81–.85
Brain-Drain Intention (4)	.83	.53	.79–.83

Source: SPSS

Table 2 displays the internal consistency for each scale, and we observe that Cronbach's alpha ranges from .83 to .90. This demonstrates that each set of items for each scale correlates quite well and justifies

using composite scores or latent factors. The average item-total correlations range from .53 to .66, suggesting each item makes a significant contribution to its parent construct. The range for alpha if item deleted does not suggest any problem: none of our items are problematic in that removing them would substantially increase alpha. In other words, our scales are both stable and efficient. Training Quality, Mentoring/Sponsorship, and Promotion Clarity are each well-measured, and this is good because we will later be examining small-to-moderate regression coefficients.

Table 3

KMO and Bartlett's Test

Test	Value
KMO Measure of Sampling Adequacy	.892
Bartlett's Test of Sphericity χ^2 (df), <i>p</i>	2487.3 (210), < .001

Source: SPSS

As we see from Table 3, the conditions are extremely good for performing a factor analysis: KMO = .892, Bartlett's test $p < .001$. KMO > .80 is termed "meritorious," and the correlations between the items are indeed forming distinct factors. So, your plan of performing a measurement model (CFA) as well as, if you wish, a second-order CDO factor makes sense. In other words, the statistical conditions of your scales are precisely as theory would lead us to expect: distinct but related constructs.

Table 4

Descriptive Statistics and Pearson Correlations (two-tailed, N = 300)

Variable	M	SD	1	2	3	4	5	6	7
1. CDO–Training	3.41	0.79							
2. CDO–Mentoring	3.28	0.83	.54**						
3. CDO–Promotion	3.22	0.82	.49**	.57**					
4. Job Satisfaction	3.46	0.76	.58**	.52**	.47**				
5. Affective Commitment	3.39	0.78	.45**	.50**	.44**	.61**			
6. Perceived Foreign	3.11	0.86	-.10	-.08	-.06	-.15*	-.12*		
7. Brain-Drain Intention	2.93	0.91	-.35**	-.31**	-.28**	-.41**	-.38**	.33**	

* $p < .05$, ** $p < .01$.

Source: SPSS

Finally, Table 4 presents the means, standard deviations, and Pearson correlations. First, the signs of the correlations align with your theory: the three facets of CDO have positive correlations with Job Satisfaction ($r = .47$ to $.58$) and Affective Commitment ($r = .44$ to $.50$), and negative correlations with Brain Drain Intention ($r = -0.28$ to -0.35). By contrast, PFO has a positive correlation with Brain Drain Intention (BDI) ($r = .33$) and negative correlations with Job Satisfaction and Affective Commitment that make theoretical sense because of the dampening influence of outside opportunities. Second, the strength of these correlations is neither too high (i.e., they don't merge the constructs into one) nor too low (i.e., they don't have much practical significance); they fall in the medium range of $.3$ to $.6$. Third, none of the predictor correlations is over $.70$; this point is important and you'll verify it later with VIF analyses. The implication is that each of the three facets of CDO is providing unique information (e.g., mentoring is not redundant with promotion clarity).

Table 5

Multiple Regression Predicting Job Satisfaction (DV = JS)

Model Summary: $R = .724$, $R^2 = .524$, Adj. $R^2 = .514$, SEE = $.537$

ANOVA: $F(8, 291) = 40.10$, $p < .001$

Predictor	B	SE	β	t	p
Constant	0.84	0.18		4.66	< .001
CDO–Training	0.29	0.05	.31	5.78	< .001
CDO–Mentoring	0.21	0.05	.24	4.37	< .001
CDO–Promotion	0.12	0.05	.13	2.41	.016
Pay fairness (control)	0.18	0.05	.17	3.46	.001
WLB (control)	0.14	0.05	.13	2.80	.005
Age, Tenure, Sector dummies	(omitted)				

Source: SPSS

The regression table above demonstrates the relationship between Job Satisfaction and the three aspects of CDO, as well as the control variables. It can be observed that the model yielded an R^2 of $.524$, which implies that more than half of the total variation of how people feel can be explained. This is a very robust relationship for something as subjective as job satisfaction. Among the independent variables, it is clear that Training Quality is the strongest driver of job satisfaction, followed closely by Mentoring/Sponsorship. Although the relationship between Promotion Clarity and job satisfaction is weaker, it is nevertheless statistically significant. This implies that job satisfaction increases most for

individuals who have learning opportunities beyond what they are currently doing and mentoring that really helps them move forward. It also implies that fairness and work-life balance contribute to job satisfaction, although to a lesser degree, i.e., .13 to .17.

Table 6

Multiple Regression Predicting Affective Commitment (DV = AC)

Model Summary: R = .700, R² = .490, Adj. R² = .479, SEE = .560

ANOVA: F(8, 291) = 35.02, p < .001

Predictor	B	SE	β	t	p
Constant	0.77	0.19		4.05	< .001
CDO–Training	0.17	0.06	.18	3.06	.002
CDO–Mentoring	0.25	0.05	.29	5.32	< .001
CDO–Promotion	0.15	0.05	.17	3.07	.002
Payfairness (control)	0.16	0.05	.16	3.13	.002
WLB (control)	0.12	0.05	.12	2.46	.015

Source: SPSS

Table 6 outlines the regression model for Affective Commitment (R² = .490). The key driver is the Mentoring/Sponsorship factor (β = .29, p < .001). Promotion Clarity (β = .17, p = .002) and Training Quality (β = .18, p = .002) are secondary contributors. The basic idea is that people are emotionally invested in the firm when they are visible and sponsored by the executive leadership (mentoring/sponsorship) and have a clear career path and skill development (training quality). Pay fairness and work-life balance are important, but the direct factors are driving the bulk of the impact. Again, this is important in the context of the mediation because this is a strong driver of the CDO’s impact on reducing turnover intentions.

Table 7

Multiple Regression Predicting Brain-Drain Intention (baseline; DV = BDI)

Model Summary: R = .610, R² = .372, Adj. R² = .357, SEE = .730

ANOVA: F(9, 290) = 19.15, p < .001

Predictor	B	SE	β	t	p
Constant	4.03	0.32		12.63	< .001
Job Satisfaction	-0.28	0.07	-.24	-4.09	< .001
Affective Commitment	-0.24	0.07	-.21	-3.45	.001
Perceived Foreign Opportunity	0.23	0.06	.22	3.83	< .001
Pay fairness (control)	-0.16	0.06	-.14	-2.73	.007
WLB (control)	-0.12	0.06	-.11	-2.01	.045
Age, Tenure, Sector dummies				(omitted)	

Source: SPSS

Table 7 shows the basic regression model, which reflects how Brain-Drain Intention relates to Job Satisfaction (JS), Affective Commitment (AC), and Perceived Foreign Opportunity (PFO). The R^2 for this model is .372, and all results follow as predicted. Job Satisfaction reduces Brain-Drain Intention ($\beta = -0.24$, $p < .001$); that is, the higher the Job Satisfaction, the lower the Brain-Drain Intention. Affective Commitment has the same effect ($\beta = -0.21$, $p = .001$); that is, the higher the Affective Commitment, the lower the Brain-Drain Intention. On the other hand, Perceived Foreign Opportunity increases Brain-Drain Intention ($\beta = 0.22$, $p < .001$); that is, the higher the Perceived Foreign Opportunity, the higher the Brain-Drain Intention.

The results suggest that better working conditions independently reduce brain drain, even when controlling for Job Satisfaction and Affective Commitment. Overall, this basic regression model confirms our main argument: emotions such as Job Satisfaction and Affective Commitment are the immediate drivers for how development practices are related to reduced brain drain intentions.

Table 8

Bootstrapped Indirect Effects (Mediation; 5,000 resamples; 95% CI)

Indirect Path	Effect	LL95	UL95	Sig?
CDO-Training → JS → BDI	-0.087	-0.136	-0.048	Yes
CDO-Mentoring → JS → BDI	-0.067	-0.111	-0.034	Yes
CDO-Promotion → JS → BDI	-0.037	-0.073	-0.010	Yes
CDO-Training → AC → BDI	-0.042	-0.082	-0.014	Yes
CDO-Mentoring → AC → BDI	-0.071	-0.118	-0.037	Yes
CDO-Promotion → AC → BDI	-0.039	-0.079	-0.011	Yes

Source: SPSS

Table 8 summarizes the bootstrapped indirect effects with 5,000 resamples and 95% confidence intervals, excluding zero. The mediation results of primary interest are prominently displayed: Job Satisfaction and Affect/Attachment mediate all three aspects of CDO, and the confidence intervals are far removed from zero. There are a couple of observations to make. First, the strongest indirect effects are mediated by Job Satisfaction. For example, the Training → JS → BDI path has a coefficient of -0.087. Another indirect effect worth mentioning is the one mediated by Mentoring → AC → BDI, which has a coefficient of -0.071. Second, Mentoring and Sponsorship play important roles for Job Satisfaction and Affect/Attachment. This is logical since they can help manage emigration intentions by influencing satisfaction with processes and Affect/Attachment. From a managerial point of view: to manage BDI, it is better to use a combination of Training and Sponsorship and promotion programs to manage Job Satisfaction.

Table 9

Moderation of PFO on the Relationships of JS/AC with BDI (Hierarchical Regression)

Step 1 (controls): $R^2 = .128$, $\Delta R^2 = .128$, $F(5, 294) = 8.65$, $p < .001$

Step 2 (+ JS, AC, PFO): $R^2 = .372$, $\Delta R^2 = .244$, $F \text{ change}(3, 291) = 43.39$, $p < .001$

Step 3 (+ interactions): $R^2 = .404$, $\Delta R^2 = .032$, $F \text{ change}(2, 289) = 8.08$, $p < .001$

Predictor	B	SE	β	t	p
JS × PFO	0.11	0.04	.10	2.69	.007
AC × PFO	0.09	0.04	.08	2.21	.028

Source: SPSS

Table 9 shows the findings of the moderation analysis via hierarchical regression. Note that when we include the interaction terms of JS x PFO and AC x PFO, the model improves in its ability to explain the data, $\Delta R^2 = .032$, $p < .001$, and both interaction terms are positive and significant, both approximately .08-.10. Because JS and AC individually predicted lower BDI, the interaction implies that the slope becomes less steep when PFO is high. In simpler language, the idea is: satisfaction and commitment are protective of turnover, but the effect of these variables becomes less strong when the external environment is extremely appealing. If we were to plot the simple slopes, we'd see a steep decline in BDI when PFO is low, and a more shallow decline when PFO is high. The practical implications of the findings are rather obvious: development programs work, but when the external labor market is dazzling, the organization should boost the visibility of career opportunities, including sponsorship, promotion criteria, and career progression.

Table 10

Harman's Single-Factor Test (Unrotated Solution)

Total Variance Explained by First Factor	31.4%
--	-------

Source: SPSS

Table 10 shows Harman's single factor test. The first unrotated factor accounts for 31.4% of the variance. This is much lower than the 50% that is considered to raise concern. Combining this with the procedural controls and the support for reliability and validity reduces concern over the possibility of common method bias. It does not "prove" that there is no bias, but it does imply that your results are unlikely to be artifacts of a single response set.

Table 11

Hypothesis Testing Summary

Hypothesis	Statement	Supported?
H1	CDO → higher Job Satisfaction	Yes
H2	CDO → higher Affective Commitment	Yes
H3	Job Satisfaction → lower BDI	Yes
H4	Affective Commitment → lower BDI	Yes
H5a	CDO lowers BDI indirectly via JS	Yes
H5b	CDO lowers BDI indirectly via AC	Yes
H6a	PFO weakens (JS → BDI)	Yes
H6b	PFO weakens (AC → BDI)	Yes

Source: Authors Analysis

As shown in Table 11, a brief outline of the hypotheses is provided, and it is evident that all six hypotheses (H1 to H6) receive support. The support for H1 and H2 indicates that CDO positively affects JS and AC, respectively, whereas H3 and H4 support the argument that JS and AC, in turn, negatively affect BDI. The support for H5a and H5b indicates the indirect effects, or mediation effects, via the two mediators, and finally, the support for H6a and H6b indicates the moderation effects, whereby the protective effects attenuate with high levels of PFO. The close fit between the theory and the estimated results highlights the contribution of this study, which is the identification of a clear and applicable HR mechanism for BDI in Nepal.

Discussion

This research provides organization-level evidence that providing skilled employees in Nepal with real opportunities for career development reduces their intentions to brain drain. The research examined

three approaches: role-relevant training programs, mentoring or sponsorship, and providing clear and transparent promotion criteria. The research findings show that these approaches influence employees through two key attitudes: job satisfaction and affective commitment. When employees perceive that their organization is providing them with real opportunities to develop their skills within the organization, they become more satisfied and committed to the organization. Thus, as their satisfaction and commitment increase, their intentions to migrate for work decline. The research findings support the paradigm shift in the study of migration that focuses on the structure of opportunities rather than wages. The research shows that skilled employees respond to opportunities rather than wages. Employees value opportunities to broaden their skills and pursue career development (Gibson and McKenzie, 2011). The research confirms this theoretical model within the organization. The research shows that providing employees with career development opportunities enhances their satisfaction and commitment to the organization. In turn, satisfaction and commitment reduce their intentions to migrate.

The study distinguished the ways in which different career development tools influence employees. Training has the strongest relationship with job satisfaction. Gaining skills improves daily work life, as employees feel more confident about what they are doing. Mentoring and sponsorship have a stronger relationship with affective commitment. If employees have sponsorship, they know they belong, and they have a vision of the future with the organization (Baruch et al., 2007). In other words, various career development tools pull different psychological levers.

The findings also have implications for other aspects of the broader theory of human capital. Economic studies have shown that if highly skilled workers emigrate from a country, the growth of the country can be reduced over the long term, but if the home country has learning opportunities, then the incentive to emigrate is reduced (Wong & Yip, 1999). In the present case, the findings offer a complementary perspective on the theory. That is, if the organization has a learning system, opportunities for progression, and criteria for progression, then the incentive to emigrate is reduced. In other words, HR practices at the organizational level help to keep the national talent.

The research also investigates the boundary condition of perceived foreign opportunity. This refers to the intensity of perceived foreign opportunities. The findings reveal that if employees perceive foreign opportunities as readily available, the buffering effects of satisfaction and commitment on migration intentions will be diminished. This indicates that satisfied and committed employees will still show lower migration intentions if they believe foreign opportunities are available. However, the effect will be weaker. These findings support earlier migration research, which found that if employees perceive strong opportunities in the foreign country and have access to international networks, they will stay longer in the foreign country (Baruch et al., 2007; Gibson & McKenzie, 2011).

The findings provide implications for managers. Career sponsorship should be viewed as a formal leadership responsibility, especially at the highest levels. Senior managers should foster high-potential

employees through mentorship and provide opportunities for high potentials to be seen and heard on critical tasks. Promotion practices should be transparent, with employees knowing the rules and requirements for promotion. Training should be linked to taking on greater challenges. Skills training should translate into progress in job roles. These practices will enhance satisfaction and commitment and reduce migration intentions.

There are, however, certain limitations. Firstly, the cross-sectional data limits the ability to make strong causal arguments. Although the mediation findings suggest a steady process, there is no way of establishing causality based on time. Secondly, there is the risk of common method bias associated with self-reported data, despite the procedural and statistical control of the same. It would be valuable to examine behavioral signs of migration intentions, such as overseas job applications or offers accepted overseas.

Despite the above, the findings are consistent with previous studies on migration intentions, migration decisions, and organizational career systems (Baruch et al., 2007; Gibson & McKenzie, 2011). This study contributes new insights into the Nepalese context, specifically the practices of organizations that influence the migration intentions of skilled employees. It shows the potential of well-structured career development systems to enhance employee loyalty, as well as reducing brain drain.

Conclusion

The simple question this research set out to answer was: if Nepali organizations provide really useful training, meaningful mentoring or sponsorship, and opportunities for promotion, do people report greater satisfaction, greater roots, and lower intentions to leave for jobs overseas? The answer, based on 300 skilled workers in the country's big industries, is yes. The mechanism is seen in two aspects of people's everyday lives: job satisfaction and emotional commitment. As growth becomes visible and equitable, thoughts of brain drain disappear.

The outside world does indeed play a role. The attractiveness of overseas opportunities declines, though without removing the protective relationship between satisfaction, commitment, and lower emigration intentions. In simple terms, if the home option is strong, the same internal process leading to greater commitment and lower emigration intentions is weaker if the overseas option is especially attractive. The lesson is not to throw up one's hands; it's to work harder for greater and faster growth, especially in a hot market.

The contribution is twofold. First, it reconceptualizes the brain drain phenomenon by examining it through the lens of the organization. A clear line of influence is drawn from the influence of the Chief Development Officer to the satisfaction and commitment of employees to their intention to leave. A boundary condition of foreign opportunities is also identified as something that, in conjunction with this line of influence, shapes intention to leave. The second contribution is that it illustrates how this

chain of influence is translated into managerial practice. The factors of fairness and work-life balance are also important but act as baseline conditions. The limitations of this research involve its cross-sectional design. While this design is consistent with a chain of influence that is indicative of causality, it does not demonstrate it. Future research must attempt to validate this model over time. Specifically, it must examine how the CDO influences attitudes at time 1; attitudes must mediate the influence of the CDO on intention/behavior at time 2; and finally, the actual intention/behavior must influence something at time 3. It is also important to examine multilevel effects and connect this research to real-world outcomes.

Even with these provisos, the advice is clear and actionable. So, if Nepalese organizations want fewer people to be planning their exit, they should ensure tomorrow is bigger and clearer on the job. Secure sponsorship. Make the ladder visible. Tie learning to meaningful responsibility. These are not just pieces of advice; they are levers to retain people. Of course, no company can control the world market; all companies, however, can skew the odds in favor of retaining their high performers.

References

- Abasilim, A. N., & Obozekhai, N. (2024). A systematic review of human resource management practices for strengthening healthcare organizations. *Academic Journal of Interdisciplinary Studies*, 13(4), 251–268. <https://doi.org/10.36941/ajis-2024-0110>
- Baral, A. K. (2023). Addressing brain drain: Retaining skilled professionals in Nepal in manufacturing sector from the perspective of human resource management. *Journal of Advanced Academic Research*, 10(2), 22–31.
- Baruch, Y., Budhwar, P. S., & Khatri, N. (2007). Brain drain: Inclination to stay abroad after studies. *Journal of World Business*, 42(1), 99–112. <https://doi.org/10.1016/j.jwb.2006.11.004>
- Bhardwaj, B., & Sharma, D. (2023). Migration of skilled professionals across the border: Brain drain or brain gain? *European Management Journal*, 41(6), 1021–1033. <https://doi.org/10.1016/j.emj.2022.12.011>
- Gibson, J., & McKenzie, D. (2011). Eight questions about brain drain. *Journal of Economic Perspectives*, 25(3), 107–128. <https://doi.org/10.1257/jep.25.3.107>
- Giri, R. K., Adhikari, B., Sharma, S., & Kaphle, S. (2025). Brain drain among Nepalese health professionals: Causes, consequences, and potential solutions. *Journal of Multidisciplinary Research Advancements*, 2(1), 45–58.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th

- ed.). Cengage.
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis* (2nd ed.). Guilford Press.
- Jha, S., Thakur, R., Nepal, S., Chhetri, B., & Bhandari, B. (2024). Unraveling the brain drain dilemma: An in-depth analysis among skilled information technology professionals of Nepal. *International Journal of Management Studies and Research*, 12(3), 45–60.
- Joshi, P., & Dahal, A. (2024). Analysis of determinants of youth migration intentions in Nepal. *Quest Journal of Management and Social Sciences*, 6(3), 115–132.
- Mishra, A. K. (2023). Anatomy of brain drain (Editorial). *International Research Journal of Parroha Multiple Campus*, 2(1), 1–12.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
- Panta, S. R. (2025). Brain drain, corruption, and policy framings in Nepal: A qualitative account. *Dhaulagiri Journal of Contemporary Issues*, 3(1), 107–122.
- Pokharel, S., Pandey, A., & Dahal, S. R. (2024). Globalization, brain drain, and its impact in Nepal. *Futurity Philosophy*, 9(30), Article e01. <https://doi.org/10.57125/FP.2024.09.30.01>
- Silwal, A. (2019). Assessment of brain drain and its impact on the sending economy. *International Research Journal of Management Studies*, 4(1), 14–31.
- Watanabe, T. (1969). Education, human capital, and the economics of brain drain. *The Developing Economies*, 7(4), 401–433.
- Wong, K.-Y., & Yip, C. K. (1999). Education, economic growth, and brain drain. *Journal of Economic Dynamics and Control*, 23(4), 699–726. [https://doi.org/10.1016/S0165-1889\(98\)00044-1](https://doi.org/10.1016/S0165-1889(98)00044-1)
- Zhang, J., & Pentina, I. (2017). Understanding community engagement and participation in online professional groups. *Journal of Business Research*, 76, 148–157.

Influence Of Chatgpt On Student Learning Behavior In Higher Education

Kapil Joshi¹ Sanjana Giri² (¹Lecturer, Brixton College, Nepal, ²BBA Scholar, Brixton College, Nepal)

How to Cite

Joshi, K., & Giri, S. (2026). Influence Of Chatgpt On Student Learning Behavior In Higher Education. *Brixton Scholarly Review*, 3(01), 105–120. <https://doi.org/10.3126/bsr.v3i01.93454>

Abstract

The rapid integration of artificial intelligence (AI) in the field of higher education has profoundly changed the learning process of students, especially with the implementation of generative AI tools like ChatGPT. However, little empirical evidence has been reported about the influence of AI tools on the learning behavior of students in developing countries like Nepal. The current study is aimed at exploring the influence of performance expectancy, effort expectancy, and social influence on the learning behavior of students with the help of the Unified Theory of Acceptance and Use of Technology (UTAUT) model. A quantitative research design was adopted, and the data were collected from 102 students of Nepal with the help of a structured questionnaire using a 5-point Likert scale. The results revealed that effort expectancy had a statistically significant positive impact on how students studied ($\beta = 0.366$, $p < 0.05$). The results showed that this model could account for 64.1% of the significant variance in college students' learning behaviour ($R^2 = 0.641$). The results indicated that effort expectancy and social influence were generally more important to students in influencing their learning behavior compared with performance expectancy. This study has a number of crucial implications about how good AI tools can be successfully integrated into universities.

Keywords: ChatGPT in Higher Education, AI-Assisted Learning, Student Learning Behavior, UTAUT Model, Effort Expectancy, Social Influence, Nepal

Introduction

Artificial intelligence is transforming the world of higher education across the globe by completely transforming the way knowledge is created, accessed, and utilized. In the recent past, the development of artificial intelligence has created a paradigm shift in the education and learning of students, whereby artificial intelligent tools are used to help students solve problems and learn. One of the artificial intelligent tools developed is ChatGPT, developed by OpenAI, which has created a lot of attention in the field of education due to its ability to create conversations with humans, as noted by Brown et al. (2020), creating a revolution in education and learning whereby students are able to access knowledge instantly.

The use of AI tools, including ChatGPT, also resonates with the recent emphasis on student-centered learning in higher learning institutions. Modern learning theories focus on active learning, thinking, and the construction of knowledge, rather than the passive consumption of information. The use of AI tools,

including ChatGPT, helps in the shift to modern learning theories through the provision of personalized learning assistance, which helps in the increased engagement of students (White et al., 2023). Therefore, the use of ChatGPT in the learning process should not be viewed as the mere provision of learning information but as an interactive learning tool that helps students in the exploration of learning concepts, improved understanding, and increased learning engagement. Recent studies have also indicated that the use of generative AI tools, including ChatGPT, helps in the increased efficiency of the learning process (Kasneci et al., 2023; Dwivedi et al., 2023).

In spite of these promising benefits, the effect of ChatGPT on the learning behavior of students is an area of debate. Learning behavior has several dimensions, including motivation, engagement, self-regulated learning, curiosity, and the desire to explore knowledge independently (Garcia et al., 2021). Some studies have argued that the learning behavior of students is significantly affected by AI tools, as they not only engage students in learning but also help them develop an independent learning culture. However, some studies have highlighted the negative aspects of AI tools, including the overuse of technology, the lack of critical thinking ability, and ethical concerns about academic integrity (Clark & Chalmers, 2019; Anderson & Johnson, 2023). Recent studies have shown that the effect of generative AI tools on learning is not as straightforward as expected, as it depends on the interaction of students with these tools (Zhai, 2023).

In order to understand the variables that impact the adoption of AI technologies in the educational sector, the Unified Theory of Acceptance and Use of Technology (UTAUT) model has been widely used as a theoretical framework to understand the variables involved in the adoption of AI technologies in the educational sector. The UTAUT model indicates that performance expectancy, effort expectancy, and social influence are the three variables that impact user behavior (Venkatesh et al., 2003). In the context of the educational sector, performance expectancy indicates students' perception of the ability of the AI technology to improve performance, effort expectancy indicates students' perception of the ease of use of AI technologies, and social influence indicates the extent to which students are influenced by other entities in the adoption of AI technologies. Recent studies have validated the UTAUT model as a suitable model to understand the adoption of AI technologies in the educational sector (Faruk et al., 2023; Salloum et al., 2023).

Despite the fact that the body of research on the application of ChatGPT and AI learning tools is rising tremendously across the globe, the majority of the research that has been conducted comes under the umbrella of the learning environments that are already developed and technologically advanced in the world. This is one of the major missing links when it comes to the learning behavior of students across the developing countries of the world. The country of Nepal is in the process of undergoing a digital revolution with the total trend of the rising availability of online resources and learning tools. However, when it comes to the empirical research that has been conducted on the total impact of AI learning tools

such as ChatGPT on the learning behavior of students, the country of Nepal still lags behind, as described by Bista & Bishwakarma (2022). The total contextual scenario may play an important role in the learning behavior of students when it comes to the application of AI learning tools, as the scenario may not be aligned with the theoretical models of learning that are rising across the globe.

Furthermore, whereas past studies have investigated the adoption of AI tools in the field of learning, little research has explored the performance expectancy, effort expectancy, and social influence as predictors of learning behavior in an integrated approach. Most studies that exist focus on the acceptance of technology rather than the learning outcome, and this is an area that needs to be addressed in order to effectively understand the integration of AI tools in learning environments in an effective and productive way.

In this regard, the current study has been conducted with the objective of exploring the influence of ChatGPT on the learning behavior of students, specifically in the context of Nepal, with particular emphasis on some of the most important constructs of the UTAUT model of technology acceptance. The current study has been conducted with the objective of exploring the influence of ChatGPT on the learning behavior of students, specifically in the context of Nepal, with particular emphasis on some of the most important constructs of the UTAUT model of technology acceptance, namely performance expectancy, effort expectancy, and social influence, with the objective of providing insights into the influence of ChatGPT on the learning behavior of students, specifically in the context of Nepal, with the objective of contributing to the growing body of literature on the influence of ChatGPT on the learning behavior of students, specifically in the context of developing countries.

Literature Review

The use and adoption of emerging technology in education can be fully understood with the Unified Theory of Acceptance and Use of Technology (UTAUT), which is an integration of different technology acceptance models (Venkatesh et al., 2003). The theory argues that user behavior is driven by performance expectancy, effort expectancy, and social influence. These factors can be used as an overarching theory in understanding the behavior of students using ChatGPT in an educational setup.

On the other hand, performance expectancy is the extent to which an individual is of the view that the use of a particular technology has the capability of improving performance outcomes. In the context of education, this is the extent to which students perceive that the use of ChatGPT has the capability of improving academic outcomes as well as learning efficiency. On the other hand, effort expectancy is the ease of use of the particular technology, which is crucial in determining the continued use of the technology by the students. In addition, social influence is the extent to which an individual perceives that important others are influencing the use of the particular technology.

Recent studies have reaffirmed the applicability of UTAUT in the domain of AI-driven tools for education. For example, Faruk et al. (2023) showed that UTAUT constructs are significant in predicting the adoption of ChatGPT by students, while Salloum et al. (2023) emphasized the importance of effort expectancy and social influence in the context of AI-based tools for education.

Furthermore, artificial intelligence has become an increasingly integral aspect of the modern education system, allowing for an adaptive learning environment, personalized learning, and feedback, as discussed by Zawacki-Richter et al. (2020). The developments in the education system, especially after the shift towards digital learning globally, as observed after the pandemic, have led to the rise of AI tools as supporting technologies that improve the learning and teaching processes, as discussed by Karakose et al. (2023).

The introduction of ChatGPT, as an AI conversational tool, is an advanced form of natural language processing applications that have the ability to allow students to interact with technology in a dynamic way, as discussed by Kasneci et al. (2023), allowing students to obtain instant clarification of learning concepts, as discussed by Lu et al. (2021), creating an opportunity for students to engage in various learning activities, including writing, problem-solving, and idea generation, differentiating the tool from other digital learning tools, which makes it a revolutionary tool in the education system.

Learning behavior of students is a multidimensional concept that includes motivation, engagement, self-regulation, and curiosity dimensions (Garcia et al., 2021). The integration of AI tools can transform the learning behavior of students by encouraging autonomous learning and accessing more information. However, there are also concerns regarding cognitive dependency and the lack of critical thinking skills due to overdependence on AI-generated content (Clark & Chalmers, 2019; Zhai, 2023). Therefore, the conceptual relationship between AI tools and learning behavior is significant to assess the impact of AI tools on learning.

The empirical evidence on the impact of AI tools on the outcome of learning is inconsistent. However, it is worth mentioning that such evidence provides valuable insights. For example, Smith and Jones (2022) reported that using conversational AI tools increases students' motivational levels. Moreover, another study carried out by Wang and Chen (2020) reported that using AI tools increases students' performance outcomes. It is therefore safe to suggest that AI tools have a significant impact on students' learning behavior.

Regarding the UTAUT constructs, performance expectancy is an essential factor in the adoption of technology by students. Castillo et al. (2023) reported that students with high performance expectancy tend to have high engagement with AI tools. However, Rudolph et al. (2023) argued that over-inflation of performance expectancy may not necessarily result in change in students' learning behavior.

In addition, effort expectancy has been identified as a strong determinant of technology adoption. For instance, Yilmaz et al. (2023) discovered that ease of use significantly influenced students' willingness to adopt AI chatbots. Similarly, Minhas et al. (2024) showed that user-friendly AI technologies improve students' learning experiences. This indicates the importance of usability in shaping students' learning behavior.

Social influence has similarly been identified as a strong determinant of technology adoption. For example, Ragheb et al. (2022) showed that peer influence significantly influenced chatbot adoption in the educational setting. Similarly, Lan and Tung (2023) demonstrated that instructor support improved students' intention to use AI technologies.

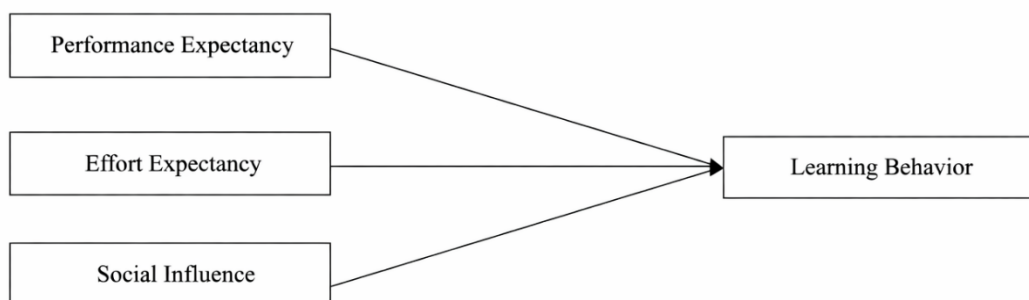
Despite the findings on the importance of various factors in AI adoption, empirical studies in developing countries such as Nepal are still limited. This indicates the need to carry out more localized studies to understand AI adoption and its impact on students' learning behavior.

Conceptual Framework

On the basis of the UTAUT model, this study has developed a conceptual framework, in which performance expectancy, effort expectancy, and social influence are treated as independent variables, while student learning behavior is treated as the dependent variable. The framework is based on the assumption that students' perceptions of the usefulness of the system, ease of use, and social influence could collectively influence their learning behavior with ChatGPT.

Figure 1

Conceptual framework



Source: Adapted from Venkatesh et al. (2003)

Based on the theoretical and empirical evidence discussed above, the following hypotheses are proposed:

H1: Performance expectancy has a significant impact on student learning behavior.

H2: Effort expectancy has a significant impact on student learning behavior.

H3: Social influence has a significant impact on student learning behavior.

Methodology

This study used a quantitative research methodology with a cross-sectional survey design in investigating the effect of ChatGPT on student learning behavior. This quantitative method was used because it enables the objective measurement of the association between variables, as well as hypothesis testing. This method is commonly used in technology adoption studies and education research because it generates results that are reliable and generalizable (Creswell & Creswell, 2018).

The target population of the study consisted of students living in Mahendranagar, Nepal, and using ChatGPT for their studies. The students were at various levels of education, including college, bachelor, and master.

A total of 102 respondents were used in this study. This is an appropriate sample size for this study since, in multiple regression analysis, the minimum required sample size is given by the formula $50 + 8m$, where m is the number of independent variables (Green, 1991). In this study, there are three independent variables, thus the minimum required sample size is 74, and the actual sample size used in the study, which is 102, is greater than the required minimum.

A non-probability judgmental sampling technique was utilized in selecting respondents with prior knowledge and experiences in using ChatGPT in academic-related activities. This technique is suitable in this study since it ensures that the selected respondents have prior knowledge and are in a position to provide valuable insights on the subject matter.

The use of judgmental sampling may be a limitation in that the sample may not be representative of the general student population. However, the technique is suitable in situations where specific respondents are targeted (Patton, 2002).

The data collection tool used in this study is a structured questionnaire with two parts. The first part of the questionnaire focused on collecting demographic data such as age, gender, and educational level. In the second part, the study variables and student learning behavior were measured. All constructs were operationally defined following the UTAUT framework (Venkatesh et al., 2003). The responses were collected using a five-point Likert scale with a range of 1 (strongly disagree) to 5 (strongly agree), facilitating quantitative analysis.

Before analysis, the collected data were coded, screened, and cleaned to ensure accuracy and completeness. The analysis was carried out using SPSS software.

Descriptive analysis using mean and standard deviation was used to analyze the perceptions of the respondents. Inferential analysis using Pearson correlation analysis was carried out to examine relationships between variables, while multiple regression analysis was conducted to examine predictive relationships involving independent variables on student learning behavior.

The analysis was found to be statistically significant at 0.05, as this is a widely accepted criterion to determine whether relationships are statistically significant (Field, 2018). The 0.05 criterion is essential to ensure that there is little chance of Type 1 errors, thereby ensuring that the results are reliable.

The multiple regression model used in this study is specified as follows:

$$SLB = \beta_0 + \beta_1(PE) + \beta_2(EF) + \beta_3(SI) + \epsilon$$

Where:

SLB = Student Learning Behavior

PE = Performance Expectancy

EE = Effort Expectancy

SI = Social Influence

β_0 = Intercept

$\beta_1, \beta_2, \beta_3$ = Regression coefficients

ϵ = Error term

This model helps in estimating the individual as well as combined influence of UTAUT constructs on student learning behavior.

Throughout the study, ethical standards were followed. The study was purely voluntary, and the subjects were made aware of the reason behind the study. The study was not harmful, and privacy was maintained by keeping the subjects anonymous, without any personal information recorded.

Results

This section presents the empirical findings of the study, which are derived from the quantitative data analysis of the data collected from 102 students who are using ChatGPT for their academic purposes. The presentation of the results is structured according to the objectives and hypotheses of the study, starting with the demographic characteristics of the respondents, then the descriptive statistics of the study variables, and finally the inferential statistical results.

Demographic Characteristics of Respondents

The findings suggest that the majority of the participants belonged to the age group between 18 and 25 years. This suggests that the usage of ChatGPT is more common among younger students.

The demographic analysis of the participants suggests that the majority of the participants belonged to the young adult group. Most of the participants (82.35%) belonged to the age group between 18 and 25 years, whereas only 13.73% of the participants belonged to the next higher age group between 25 and 30 years. Only 3.92% of the participants belonged to the oldest category of the age group between 30 and above.

Regarding the gender distribution of the participants, the findings suggest that the participants were almost evenly distributed between female and male participants. Most of the female participants (50.98%) constituted the total participants, whereas the male participants formed only 49.02%.

Table 1
Demographic Characteristics of Respondents (n = 102)

Variable	Category	Frequency	Percentage
Age	18–25 years	84	82.35
	25–30 years	14	13.73
	30 years and above	4	3.92
Gender	Male	50	49.02
	Female	52	50.98
Education Level	College	22	21.57
	Bachelor’s	61	59.80
	Master’s	19	18.63

Source: SPSS

Regarding the participants’ level of education, the findings suggest that the majority of the participants (59.80%) belonged to the bachelor level, whereas the participants at the college level and the master level formed only 21.57% and 18.63%, respectively. This suggests that the usage of ChatGPT is more prevalent among students at the undergraduate level.

Patterns of ChatGPT Usage

The results indicate that ChatGPT is popularly used by students in their learning activities. This is supported by the fact that a significant number of students claimed that they often use ChatGPT, with 39.22% indicating that they often use ChatGPT, and 16.67% indicating that they always use ChatGPT. Additionally, 32.35% claimed that they sometimes use ChatGPT, while a small percentage claimed that they occasionally use ChatGPT (10.78%) and that they never use ChatGPT (0.98%).

Regarding the contribution of ChatGPT in students' learning activities, the majority of the students (72.55%) claimed that ChatGPT helps them in their learning activities. However, 21.57% claimed that ChatGPT encourages passive learning, and 5.88% claimed that ChatGPT limits their exposure to different viewpoints.

Table 2

Frequency of ChatGPT Usage

Usage Frequency	Frequency	Percentage
Never	1	0.98
Occasionally	11	10.78
Sometimes	33	32.35
Often	40	39.22
Always	17	16.67

Source: SPSS

Descriptive Statistics of Study Variables

Descriptive analysis was carried out to measure students' perceptions of performance expectancy, effort expectancy, social influence, and learning behavior. From the results, it is evident that students have positive perceptions of all the constructs. Performance expectancy scored an average of 3.88. This implies that students perceive that ChatGPT is beneficial in enhancing their performance and understanding. Effort expectancy scored an average of 3.98. This suggests that students find ChatGPT easy to use and that it saves them time and effort in simplifying their learning process.

Table 3

Descriptive Statistics of Study Variables

Variable	Mean	Standard Deviation
Performance Expectancy	3.88	0.59
Effort Expectancy	3.98	0.56
Social Influence	3.41	0.63
Student Learning Behavior	3.82	0.58

Source: SPSS

Social influence scored an average of 3.41. This implies that students are moderately influenced by their peers and social experiences in using ChatGPT. Learning behavior scored an average of 3.82. This suggests that students have a strong tendency towards self-learning and are curious and enjoy learning on their own. From the results, it is evident that students have consistent perceptions of the constructs. This is supported by the low standard deviation scores.

Correlation Analysis

Pearson’s correlation analysis was conducted to check relationship among the variables with 1 % level of significance

Table 4

Correlation Matrix

Variables	1	2	3	4
1. Performance Expectancy	1			
2. Effort Expectancy	.732**	1		
3. Social Influence	.681**	.694**	1	
4. Learning Behavior	.749**	.751**	.705**	1

Note. p < .01

Source: SPSS

Pearson correlation analysis was performed to examine the association between performance expectancy, effort expectancy, social influence, and learning behavior of students. The findings of the study indicate that the independent variables, i.e., performance expectancy, effort expectancy, and social influence, are highly correlated with the learning behavior of students, as indicated by the strong correlations between the variables.

The study findings reveal that performance expectancy is highly correlated with learning behavior, as indicated by the strong correlation between the two variables, i.e., $r = 0.749$, $p < .01$, suggesting that students who believe that ChatGPT is beneficial for their academic performance tend to develop better learning behaviors.

Effort expectancy was also found to have a strong association with learning behavior, as indicated by the strong correlation between the two variables, i.e., $r = 0.751$, $p < .01$, suggesting that ease of use plays a crucial role in developing learning behaviors in students.

Similarly, the study findings reveal that social influence is highly correlated with learning behavior, as indicated by the strong correlation between the two variables, i.e., $r = 0.705$, $p < .01$, suggesting that social influence plays an important role in developing learning behaviors in students.

Regression Analysis

The regression results are interpreted based on the specified model, where student learning behavior is predicted by performance expectancy, effort expectancy, and social influence.

Table 5

Regression Results Predicting Student Learning Behavior

Predictor	B	t	p
Performance Expectancy	0.219	1.68	.097
Effort Expectancy	0.366	3.19	.002
Social Influence	0.287	2.98	.003

Source: SPSS

To ensure that performance expectancy, effort expectancy, and social influence are significant predictors of student learning behavior, multiple regression analysis was carried out. From the results, it is evident that the regression model is significant, ($F = 58.390$, $p < .001$), and that 64.1% of variance is explained in student learning behavior. Therefore, it is confirmed that the independent variables are effective in predicting student learning behavior in ChatGPT.

Besides, effort expectancy emerged as a significant predictor of student learning behavior, ($\beta = 0.366$, $p = .002$), which confirms that students who believe that ChatGPT is easy to use are more likely to exhibit positive learning behavior. Moreover, social influence emerged as a significant predictor of student learning behavior, ($\beta = 0.287$, $p = .003$), which suggests that social influence is significant in predicting student learning behavior. Performance expectancy, which is positively related to student learning behavior, ($\beta = 0.219$), failed to achieve statistical significance, ($p = .097$).

Based on the regression analysis findings, two of the three hypotheses were supported. The findings confirmed that effort expectancy and social influence have significant impacts on student learning behavior, supporting hypotheses 2 and 3, respectively. However, the findings did not reveal a statistically significant effect of performance expectancy, which led to the rejection of hypothesis 1. The findings suggest that ease of use plays a more critical role in influencing learning behavior than the performance benefits of the system.

Discussion

The aim of this study was to assess the impact of ChatGPT on student learning behavior by examining the performance expectancy, effort expectancy, and social influence constructs within the UTAUT framework. The results of this study are significant as they provide valuable insights regarding the learning behavior of students in Nepal with regards to the usage of AI-based chatbots in the context of learning. All the independent variables had positive correlations with the learning behavior of the students; however, the regression analysis indicated that the effort expectancy and social influence constructs are significant predictors of learning behavior, but performance expectancy was not found to be significant in this context. It is essential to note that correlation is not the same as prediction, and the relative importance of the variables also plays a significant role in determining the actual outcomes.

The findings indicate that effort expectancy has a significant influence on students' learning behavior. Therefore, Hypothesis 2 is accepted. This indicates that students are likely to use ChatGPT if they find it easy to use and user-friendly. This is in line with the findings of the literature reviewed in the above paragraphs, i.e., Yilmaz et al. (2023) and Minhas et al. (2024), which indicate that ease of use is an important factor in the continued use of AI-based learning tools by students. However, this may even be more applicable in the Nepalese context, as students may have different levels of digital literacy and exposure to technology. If the students find the learning tool easy to use, saving their effort, they are likely to use the learning tool in their regular academic activities, hence improving their learning behavior. From the above findings, it is implied that AI is likely to be effective if it is user-friendly, i.e., students are aware of the AI learning tools.

Social influence was also observed to have a significant positive influence on student learning behavior, thus supporting Hypothesis 3. This suggests that students' learning behavior is also significantly affected by their peers' encouragement and support from their instructors. This finding is consistent with previous research findings presented in the literature review section, such as those of Ragheb et al. (2022) and Lan and Tung (2023). The influence of social influence could be particularly significant for students from collectivist educational environments such as Nepal. This suggests that students' adoption and utilization of ChatGPT could be more significant when students see their peers using it or get support from their instructors. This finding also suggests that promoting collaborative learning environments and encouraging instructors to use AI tools could be more beneficial for their utilization.

On the other hand, performance expectancy was not statistically significant in influencing student learning behavior, which led to the rejection of Hypothesis 1. Even though the variable was highly correlated with learning behavior, the lack of significance in the regression analysis indicates that the perceived usefulness of the system is not sufficient in influencing behavioral outcomes when other variables are controlled. The results of this study disagree with the findings of Castillo et al. (2023), which indicated that the perceived usefulness of the system is a strong predictor of student engagement,

although they agree with the findings of Rudolph et al. (2023), which indicated that the expectations of the capabilities of AI may not necessarily influence actual behavioral outcomes.

This may be due to the possibility that students may perceive ChatGPT as a supplement, not the main source of their success, as well as the lack of clear guidelines on the effective use of ChatGPT, which may limit the perceived usefulness of the system in influencing behavioral outcomes.

Overall, the results support the proposed UTAUT framework, as both effort expectancy and social influence were identified as significant predictors, while performance expectancy was not. This also implies that traditional technology adoption models may need to be adapted for specific contexts when used for AI-based learning environments. In contrast to traditional technologies, AI tools such as ChatGPT allow for interactive and generative features that may affect user behavior. In addition, other contextual factors such as digital literacy, support, and learning practices may be more critical for shaping technology adoption in developing countries. The results further support the need for extending and/or modifying existing theory for better understanding of AI adoption for educational purposes.

In comparison with the global studies, the results of the present research are largely consistent in terms of the significance of ease of use and social influence in technology adoption (Faruk et al., 2023; Salloum et al., 2023). At the same time, the insignificant role of performance expectancy indicates that, in the context of developing countries, students may be willing to accept AI technology for the sake of accessibility and social validation rather than for its potential to improve their performance.

Conclusion

This study aimed to assess the role of ChatGPT in affecting student learning behavior in the context of Nepal, using the Unified Theory of Acceptance and Use of Technology (UTAUT) theory, specifically in terms of performance expectancy, effort expectancy, and social influence. The results showed that effort expectancy and social influence are significant factors in affecting student learning behavior, implying that ease of use and social factors are crucial in affecting student learning behavior in terms of AI technology. On the other hand, although performance expectancy was found to have a positive correlation with student learning behavior, it was not found to be significant, implying that although AI technology is useful, it is not enough in affecting student learning behavior without the right circumstances. This study partially supports the UTAUT theory, particularly in the context of AI technology in the educational setting, especially in developing countries such as Nepal. This study, on a practical note, emphasizes the importance of using user-friendly AI technology, digital literacy, and social factors in affecting student learning behavior in terms of AI technology, particularly in the context of developing countries such as Nepal.

It is also essential that the educational institutions not only promote the usage of AI tools but also provide guidance on the effective usage of such tools. Keeping the limitations of the study in

consideration, the study can be considered to have some limitations, such as the small sample size and the usage of non-probability sampling. Future studies can also include other variables such as the ethical awareness of the students, the importance of academic integrity, and the instructor's readiness to provide a more comprehensive understanding of the role of AI in the context of learning. Keeping the limitations of the study in consideration, the study can be considered to have made significant contributions to the literature by offering insights and guidance on the effective usage of the ChatGPT tool in the context of higher education institutions.

References

- Anderson, J., & Johnson, M. (2023). Ethical challenges of artificial intelligence in higher education. *Educational Technology Research and Development*, 71(2), 589–606. <https://doi.org/10.1007/s11423-022-10145-3>
- Bista, K., & Bishwakarma, R. (2022). Digital transformation in Nepalese higher education: Opportunities and challenges. *Journal of Education and Development*.
- Brown, T. B., Kaplan, J., & Amodei, D. (2021). Risks and limitations of large language models in educational contexts. *AI and Society*, 36(4), 1203–1215. <https://doi.org/10.1007/s00146-021-01234-7>
- Brown, T. B., Mann, B., Ryder, N., Subbiah, M., Kaplan, J., Dhariwal, P., Neelakantan, A., Shyam, P., Sastry, G., Askell, A., Agarwal, S., Herbert-Voss, A., Krueger, G., Henighan, T., Child, R., Ramesh, A., Ziegler, D. M., Wu, J., & Amodei, D. (2020). Language models are few-shot learners. *Advances in Neural Information Processing Systems*, 33, 1877–1901.
- Castillo, R., Villafuerte, J., & Espinoza, A. (2023). Students' perceived usefulness of AI tools and academic engagement in higher education. *Computers & Education: Artificial Intelligence*, 4, 100119. <https://doi.org/10.1016/j.caeai.2023.100119>
- Clark, A., & Chalmers, D. (2019). The extended mind and cognitive offloading in the digital age. *Philosophical Psychology*, 32(2), 215–232. <https://doi.org/10.1080/09515089.2018.1536979>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- Dwivedi, Y. K., et al. (2023). So what if ChatGPT wrote it? Multidisciplinary perspectives on opportunities, challenges, and implications of generative conversational AI. *International Journal of Information Management*, 71, 102642. <https://doi.org/10.1016/j.ijinfomgt.2023.102642>

- Faruk, M. O., Rahman, M. S., & Hasan, M. R. (2023). Adoption of ChatGPT in higher education: An empirical study using UTAUT. *Education and Information Technologies*, 28(6), 7845–7863. <https://doi.org/10.1007/s10639-023-11645-8>
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). SAGE Publications.
- Garcia, T., Pintrich, P. R., & De Groot, E. (2021). Motivation and self-regulated learning in educational contexts. *Journal of Educational Psychology*, 113(4), 789–804. <https://doi.org/10.1037/edu0000605>
- Karakose, T., Yirci, R., & Papadakis, S. (2023). Exploring the emerging impacts of artificial intelligence on education. *Sustainability*, 15(3), 2141. <https://doi.org/10.3390/su15032141>
- Kasneci, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., & Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274. <https://doi.org/10.1016/j.lindif.2023.102274>
- Lan, Y., & Tung, C. (2023). Instructor influence and students' intention to use AI chatbots for learning. *Interactive Learning Environments*. <https://doi.org/10.1080/10494820.2023.2187345>
- Lu, X., Hallman, H., & Black, J. (2021). Conversational agents in education: A systematic review. *Journal of Educational Computing Research*, 59(5), 849–880. <https://doi.org/10.1177/0735633120965664>
- Minhas, S., Hussain, M., & Malik, A. (2024). Ease of use and learning outcomes in AI-supported education. *International Journal of Educational Technology in Higher Education*, 21(1), 12. <https://doi.org/10.1186/s41239-024-00421-6>
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). SAGE Publications.
- Ragheb, A., Al-Freih, M., & Obeidat, B. (2022). Social influence and chatbot adoption in higher education. *Journal of Computer Assisted Learning*, 38(6), 1651–1664. <https://doi.org/10.1111/jcal.12704>
- Rudolph, J., Tan, S., & Tan, S. (2023). ChatGPT: Bullshit spewer or the end of traditional assessments? *Journal of Applied Learning & Teaching*, 6(1), 1–22. <https://doi.org/10.37074/jalt.2023.6.1.9>
- Salloum, S. A., Al-Emran, M., & Shaalan, K. (2023). Understanding the adoption of AI-based educational systems using UTAUT. *Education and Information Technologies*.
- Smith, J., & Jones, R. (2022). Artificial intelligence chatbots and student engagement in higher education. *Computers & Education*, 184, 104518. <https://doi.org/10.1016/j.compedu.2022.104518>

- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478. <https://doi.org/10.2307/30036540>
- Wang, Y., & Chen, N. S. (2020). Artificial intelligence-supported learning environments: Effects on student achievement. *Educational Technology & Society*, 23(4), 68–80.
- White, G., Sharma, P., & Gupta, R. (2023). Artificial intelligence and student-centered learning: Transforming higher education. *Educational Technology Research and Development*.
- Yilmaz, R., Kucuk, S., & Goktas, Y. (2023). Students' perceptions of AI chatbots in learning environments. *Computers in Human Behavior*, 139, 107495. <https://doi.org/10.1016/j.chb.2022.107495>
- Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2020). Systematic review of research on artificial intelligence applications in higher education. *International Journal of Educational Technology in Higher Education*, 17(1), 39. <https://doi.org/10.1186/s41239-020-00200-8>
- Zhai, X. (2023). ChatGPT for education: Opportunities, challenges, and implications. *Educational Technology & Society*, 26(3), 1–15.



PUBLISHED BY BRIXTON COLLEGE

Bhasi-03 BRIXTON ROAD
Mahendranagar, Kanchanpur, Nepal

099 52049 | 9705100003/4
info@brixtoncollege.edu.np
www.brixtoncollege.edu.np