



JEST

Sukkur IBA
Journal of Educational Sciences
& Technologies

HEC Recognized Journal “Y” Category 2022-2023

Volume-2 | No.2 |

P - ISSN: 2710-1703 | E-ISSN:2789-8083



DEPARTMENT OF EDUCATION
SUKKUR IBA UNIVERSITY
AIRPORT ROAD, SUKKUR-65200, SINDH, PAKISTAN
PH: 071-5644290 - 5644240



Sukkur IBA Journal of Educational Sciences and Technologies (SJEST) is the bi-annual research journal published by Department of Education, Sukkur IBA University, Sindh, Pakistan. SJEST is dedicated to serve as a key resource to provide applied research associated with Educational sciences and technologies at the global scale. This journal publishes manuscripts, which are well written by highlighting new trends in educational sciences, social sciences and emerging technologies.

Copyright:

All copy rights are reserved with SIBA. No portion of this publication may be reproduced, distributed, transmitted in any form or by any means i.e. recording, photocopying, or other mechanical or electronic methods, without the prior permission of the publisher except as may be noncommercial use for education and research.

Disclaimer:

The research published in Sukkur IBA Journal of Educational Sciences and Technologies (SJEST) is original contribution of the author. The research work of the author(s) does not reflect ideas and believes and opinions of publisher and its management, advisory board and the editorial board of Sukkur IBA University press. Manuscripts published in SJEST are through double-blind peer-reviewed by two independent field experts (National and International). The identities of the experts/reviewers shall remain anonymous to the authors. The journal is publishing biannually in June and December every year. Neither the Sukkur IBA University nor the SJEST is responsible for errors and consequences highlighted by the reader(s). The errors and deficiencies in terms of research in manuscript may directly be reported to the author(s).

Mission Statement

The mission of Sukkur IBA University Journal of Educational Sciences and Technologies is to provide a premier interdisciplinary platform to researchers, scientists, educators and educationists from the fields of educational sciences and technologies for the dissemination of innovative solution oriented social and applied research.

Aims & Objectives

Sukkur IBA University Journal of Educational Sciences and Technologies publishes and encourages the submission of on the cutting edge research in the field of Educational sciences and technologies

Research Areas

- ❖ Science Education
- ❖ Maths Education
- ❖ Foundations of Education
- ❖ Educational Technologies
- ❖ Sports and Health Sciences
- ❖ Language, Pedagogy and Policy
- ❖ Humanities and Social Sciences
- ❖ Teacher Education and Training
- ❖ Technical and Vocational Education
- ❖ Teacher, School, Community and Society
- ❖ History of Education, Science and Technology

Research Themes

The research focused on but not limited to following core research domains:

- ❖ Classroom Management or Classroom-centered research
- ❖ Counseling and Guidance
- ❖ Development of Learning Environment
- ❖ Discourse Analysis
- ❖ Diversity and Learning
- ❖ Diversity and Teaching
- ❖ Education and Society
- ❖ Educational Management
- ❖ Educational Research
- ❖ E-Learning and Knowledge Management
- ❖ Augmented and Virtual Reality Based Education
- ❖ Technical and Vocational Education
- ❖ Educational Technologies
- ❖ Gamification and Simulation Based Education
- ❖ Engineering Education
- ❖ Research Design and Methods
- ❖ Industrial Education and Sciences
- ❖ STEM Education

- ❖ Human Resource Management in Education
- ❖ Pedagogy and Skill development
- ❖ Innovative Pedagogical Models
- ❖ Quality Management
- ❖ Quality in Teacher Education
- ❖ Sustainability of Teacher Education
- ❖ Sports and Education
- ❖ Teaching and learning
- ❖ Teaching of specific skills
- ❖ Theories and practice in Education
- ❖ Theories and practice in Educational Research
- ❖ Time Management and Skill development
- ❖ Time Management and Students Performance
- ❖ International Education and Development
- ❖ Educational Philosophy
- ❖ Teacher Education
- ❖ Educational leadership
- ❖ Science Education
- ❖ Mathematics education
- ❖ Teaching of English
- ❖ ICT in Education
- ❖ Inclusive education
- ❖ Early childhood education
- ❖ Educational psychology
- ❖ Educational for sustainable development
- ❖ Comparative education
- ❖ Distance education
- ❖ Curriculum Development
- ❖ Assessment in Education
- ❖ Elementary and Secondary Education
- ❖ Higher education
- ❖ School Improvement
- ❖ Sciences Education
- ❖ Humanities of Social Sciences
- ❖ Mathematics Education
- ❖ Language and Pedagogy and policy
- ❖ Educational Technologies
- ❖ Teacher Education and Training
- ❖ School Teacher and Community
- ❖ Educational Society
- ❖ Foundations of Education
- ❖ Sports and Health Sciences
- ❖ Technical and Vocational Education

Patron's Message

Sukkur IBA University has been imparting education with its core values merit, quality and excellence since its inception. SIBA University has achieved numerous milestones in a very short span of time that hardly any other university has achieved in the history of Pakistan. SIBA University has established its Department of Education (DoE) in 2012 to improve, enhance and maintain the quality education through producing professionally trained teachers and researchers.

The Vision of the DoE is to become reputed teacher education department, which practices international standards of teaching, research, and training with the aim to produce world class teachers and educational managers. The broad goals of DoE are to develop innovative and effective educational models for school improvement, educational leadership and management, curriculum design and assessment and implement them in Pakistani educational contexts and classroom settings in order to get maximum benefits through economic growth and development. The prime purposes of DoE are to build the capacity of teachers and educational institutions to enhance teachers' and teacher educators' professional attitude, to elevate the status and self-esteem through fostering a sense of professionalism, knowledge, competencies, skills, critical thinking, scientific behavior and decision making power.

The SIBA Journal of Educational Sciences and Technologies (SJEST) provides a platform to educational professionals to share their research work. The Journal is multidisciplinary and serves wide areas of educational sciences and technologies. In particular, this journal promotes researches that are essential for the enhancement of quality of education. SJEST aimed to achieve international repute and high impact research journal in near future.

Prof. Dr. Mir Muhammad Shah
Vice Chancellor and Patron SJEST
Sukkur IBA University

Editorial

Dear Readers,

It's a matter of great pleasure to bring you volume II, issue II of **Sukkur IBA University Journal of Educational Sciences and Technologies (SJEST)**, a multidisciplinary and interdisciplinary journal. This issue went through the double-blind peer-reviewed articles, which address the key issues in the field of educational sciences, and technologies i.e. ideology of the West in Hamid's perspectives; students' misconceptions and their causes in photosynthesis and respiration; leaders as instructional managers; the career progression of women at universities level; and the enhancement of ECE enrollment. The covered areas provide good insights into ideology, science education, educational leadership and management, career planning and execution, and enrollment increase techniques. The researched topics and areas provide good reading materials supported by different research findings to all readers to understand the phenomena properly. The findings of the published papers will be helpful in learning different points of view and directions about the different phenomena and are a good addition to the body of existing literature.

SJEST has an institutional association with the **Department of Education, Sukkur IBA University**, which beliefs in the quality of education and research, and the opening of this journal is an outcome of strong research orientation. In addition, the **SJEST** provides a valuable platform for national and international researchers to publish their research articles in order to disseminate their findings to the largest number of audience globally in order to bring scientific and authentic solutions to problems.

On behalf of the **SJEST**, I welcome the submissions for the upcoming issues of the journal and looking forward to receive your valuable feedback for the betterment of the journal.

Thanks

Dr. Zafarullah Sahito
Editor-in-Chief
SJEST

Editorial Board

Patron:

Prof. Dr. Mir Muhammad Shah

Chief Editor:

Dr. Zafarullah Sahito

Associate Editor(s):

Dr. Muhammad Mujtaba Asad

Dr. Tasadaque Ali Shah

Managing Editor(s):

Dr. Sohail Ahmed Memon

Co-Editor(s):

Dr. Al Karim Dattoo

Dr. Sharik Zameer

Language Editor(s):

Dr. Hassan Ali Shah

Dr. Ali Nawab

Syed Tanweer Ahmed Shah

Project & Production Management:

Ms. Suman Shaikh

Mr. Imtiaz Ahmed

Mr. Mansoor Ahmed Channa

Editorial and Advisory Board

International Members

Prof. Dr. Yusuf Syed
Sussex University, UK

Prof. Pertti Vaisanen
University of Eastern Finland

Prof. Sari Havu-Nuutinen
University of Eastern Finland

Prof. Dr. Asadullah Shah
Utara Malaysia

Dr. Saeeda Shah
Leister University, UK

Dr. Sikandar Ali Babar
Norway University

Dr. Benedicte Gendron,
Universite Paul Valery, France

Dr. Anita Ramli
University Techn: PETRONAS, Malaysia

Dr. John Alexander Cash
University of Sussex, UK

Dr. Barbara M. Crossouard
University of Sussex, UK

Dr. Daniella S. Rabino
University of Sussex, UK

Dr. Jimena Hernandez Fernandez
CIDE, Mexico

Dr. Farzana Bardai
University of Sussex, UK

Dr. Kouros Kouchakpour
University of Sussex, UK

National Members

Prof. Dr. Muhammad Memon
(Chairman), BIHE Hyderabad, Sindh, Pakistan

Prof. Dr. Nasim Qaisrani
Iqra University, Karachi, Sindh, Pakistan

Prof. Dr. Nabi Bux Jumani
International Islamic University, Pak

Dr. Barkat Bhayo
Sukkur IBA University, Sindh, Pakistan

Prof. Dr. Abdul Sattar Almani
Faculty of Education, University of Sindh

Dr. Niaz Ahmed Bhutto
Sukkur IBA University Pakistan

Prof. Dr. Abida Siddiqui
Faculty of Education, University of Sindh

Dr. Iftikhar Ahmed Baig
University of Education, Lahore

Dr. Irfan Ahmed
Sukkur IBA University, Sindh, Pakistan

Dr. Javed Hussain Brohi
Sukkur IBA University, Sindh, Pakistan

Dr. Faheem Akhter Chacher
Sukkur IBA University, Sindh, Pakistan

Dr. Shahid Hussain Mughal
Sukkur IBA University, Sindh, Pakistan

Dr. Aijaz Ahmed Tatlah
Sukkur IBA University, Sindh, Pakistan

Dr. Rifat Abass
Sukkur IBA University, Sindh, Pakistan

Contents

S#	Research Title	Page No.
01	Ideology of the West in Hamid's the Reluctant Fundamentalist <i>Abdul Bari Khan, Huda Irshad Siddiqui, Hafiza Sana Mansoor, & Wajeeha Bakhtiyar</i>	01-10
02	Exploring Students' Misconceptions and their Causes in Photosynthesis and Respiration: A Case Study of a Private Sector School of Sukkur, Sindh, Pakistan <i>Khola Anwar, Roshan Ali, Azmat Qadeer, & Khan Zada</i>	11-25
03	Leaders as Instructional Managers: An Exploration of Challenges Faced by Head Teachers Appointed through IBA Sukkur <i>Sayed Sumbul shah, Shakeel Ahmad, & Adil Hussain Ghani</i>	26-42
04	The Gendered Academy: Women's Career Progression in Pakistani Universities <i>Rabia Ali, Mamoona Usman, & Muhammad Ilyas Khan</i>	43-58
05	Identification of Effective Strategies for the Enhancement of ECE Enrollment Ratio: A Study of the Schools of District Kamber Shahdakkot and Khairpur Mirs <i>Abul Ala Mukhtar Soomro, Shahid Hussain Wassan, & Dr Ghulam Muhiuddin Solangi</i>	59-79

Ideology of the West in Hamid's the Reluctant Fundamentalist

Abdul Bari Khan¹, Huda Irshad², Hafiza Sana Mansoor², Wajiha Bakhtiar²

¹ Faculty of Language and Communication, University Malaysia Sarawak, Kota Samarahan, Malaysia

² English Department, Institute of Southern Punjab, Multan, Pakistan

Corresponding author's email: 17010087@siswa.unimas.my

Abstract

This study intends to explore the ideology of the West in The Reluctant Fundamentalist by Hamid who successfully portrayed the impact of 9/11 to view the ideology of the West for the East (Muslims). Edward Said's Orientalism is an idea that represents the views of the West about the East that fails to understand the cultural differences and perceives the East as biased, and subverts being opposed to reality. Racism and inequality are mostly caused by the West's perception of the East as other people. This idea of the West is rooted in the history of colonization and racism. The media, which portrays beard men as dangerous, suspicious, and prone to bad behavior, is also considered to be blamed for this animosity. The study follows qualitative research in the literary work of The Reluctant Fundamentalist by Hamid through the dialogues of Changez. The novel depicted Changez as a reluctant fundamentalist who faced criticism for his Muslim identity due to the violent acts of some extreme radicals and gave rise to the racist ideology of Islamophobia of the West. After the incident, the USA lost its pragmatism, making it exceedingly difficult for Muslims to survive the kind of extremism to which they were frequently subjected.

Keywords: *colonization, fundamentalism, ideology, islamophobia, orientalism, racism.*

1. Introduction

Ideology is a powerful tool that motivates actions. In an Online Etymology Dictionary, Harper stated that the word ideology is derived from French *idéologie* study or science of ideas coined by French philosopher Tracy (1796) in his work *Éléments d'idéologie*. Tracy attempts to explain an ideology as a science of ideas that controls the minds of people in order to manipulate or motivate mental capability to acquire knowledge using senses. These senses are developed through the interaction of people with the world which further creates or refines ideas in their minds.

In the essay *Ideology and Ideological State Apparatuses*, French Marxist philosopher Althusser (1971) proposed that "ideology represents the imaginary relationship of individuals to their real conditions of existence" (p. 162). Althusser aims to define the relationship between ideology and existence as an imaginary one. "Make up ideology does not have an ideal or spiritual existence, but a material existence" (Althusser, 1971, p. 165). Another scholar, and a British literary theorist, Eagleton (1991) in his work *Ideology* describes ideology as a closed system of concepts that helps to make sense of the world experienced through social interaction (p. 2). Also, it's the ideology that shapes Western rationality such as racism, nationalism, religion, war, or the vision of future history as a kind of 'heaven on earth' in communism (Drabinski, 2019; Vietta, 2013). The book

Ideology and U.S. Foreign Policy explains “ideologies are important because they constitute the framework in which policymakers deal with specific issues and in which the attentive public understands those issues” (Hunt, 2009, p.16). Ideologies that remain prevalent and dominant in society can be religious, political, or social. Ideologies may be considered true when become shared experiences but are prone to change. Ideologies act as weapons for nations to maintain their power structures. It is colonization that advocates the diversification of territories of nations for settling new land, superseding the primeval population, and implanting western values. It was evolved between the 17th to 19th Centuries by Britain, France, Spain, and the USA as colonizers. As Said’s (1979) Orientalism depicts: “From the beginning of the nineteenth century until the end of World War II France and Britain dominated the Orient and Orientalism; since World War II America has dominated the Orient and approaches it as France and Britain once did” (p. 4).

White supremacy is a political philosophy and a system of racial dominance (Vietta, 2013) that has played a significant role in this nation since its inception and this leads to the discriminatory attitude of Americans toward others especially Muslims and after the incident of 9/11 their hate and aggression grew ceaselessly (Deleuze & Gattari, 2000; Goonetilleke, 1998). Above mentioned phrases by Said is pointing at the colonization which is an outcome of World War II and the root cause of hatred and racism between nations. Both the colonizer and the colonized had been resisting each other for a long time (Joholee, 2016; Scanlan, 2010). It is the validation of the Western and white domination of the world oppressing people on the basis of skin color to forge them inferior to their oppressors. In *Racism and Culture*, a French West Indian psychiatrist and political philosopher identified Racism that goes along the line of humanity to define the superiority of the power structure of institutions (Fanon, 1967, p. 36). The term Racism specifies dominating power structure placing humanity at the margin in order to suppress the weaker (Hutcheon, 1988; Nietzsche, 1969).

1.1 Problem Statement

The West is unable to understand the cultural differences between the nations and perceives the East as biased, and subverts being opposed to reality. The delusion of Western culture created a swap in Changez as he continued to enjoy all the immoral activities that are forbidden in the religion but the event of 9/11 made him realize the importance of the religious identity and he abandoned all the fantasies of the Western world and started to practice his religion.

The study will change the ideas about the East from the perspective of ideologies created by the West. It will act significantly to restrain cultural imperialism that fascinates individuals to abandon their cultural identity. It emphasizes the importance of one’s own cultural and religious identity.

1.2 Aim, Objectives and the Research Questions of the Study

This research aims to highlight the fallacy created by the West about Islamophobia and Muslims as fundamentalists and terrorists with the object of suppressing weak nations and exercising their power. While the *research objectives are* (a). to unveil the hegemony of powerful nations to subjugate weak nations; (b). to reveal the psychological impacts on subjugated nations; and (c). to bring to light the socially constructed ideologies. These objectives were tried to achieve through research questions i.e. (i). *Research questions*; (ii). How do superior nations utilize power to subjugate the weak; (iii). What is the psychological effect of Western hegemony on the East; and (iv). How do ideologies create misconceptions?

2. Literature Review

The Reluctant Fundamentalist is a novel, written in a dramatic monologue by Hamid in 2007. The novel gives us an insight into the life of the protagonist, Changez who narrates his time in the USA

to a stranger he met at a café in Lahore and how he idolized the USA and was proud to be called an American. He worked hard to achieve his American Dream but it was during his time in Manila when he witnessed the collision of the Twin Towers of the USA's World Trade Center, which brought a drastic change in Changez's life. He was subjected to hate and racism and felt alienated. Muslims of the East were accused of preaching destruction and violence in account of the vicious actions of some extreme radicals calling themselves Taliban—an extreme Islamic group, that ruled Afghanistan from 1996 to 2001. Their motive was to impose their exegesis of Islamic laws and to detach the supremacy of foreign powers.

To intricate the Western viewpoint about Muslims noticeably after the incident of 9/11, Nurullah (2010) brought to light the image of Muslims and Arabs as detrimental to Hollywood media through the television serial 24. Nurullah has exercised Edward Said's theory of Orientalism to expose the power of media in shaping us versus them in society on the basis of class, gender, and race. "A way of coming to terms with the orient that is based on the Orient's special place in European Western experience" (Said, 2011, p. 1). The West has misinterpreted the East as Other. In Fox Network's popular serial 24, a certain group is treated to be other. It is after World War II that Muslims have been portrayed as indulging in various acts of violence and demolition. Even the incident of 9/11 has judged the whole Muslim community on the acts of Osama Bin Ladin. In most Hollywood movies, for example, Rules of Engagement (2000) and Death Before Dishonor (1987), a dichotomy between civilized and uncivilized nations has always been created that calls Arabs 'bastards', 'camel-dicks', 'pigs', 'jackals', 'rats', 'rag-heads', 'scum-buckets', 'buzzards of the jungle', and 'son of whores' (Shaheen, 2003, p. 11). Said argues that "of this coverage can be attributed to the political influence of those people and institutions producing it rather than necessarily to truth or accuracy" (Covering Islam, 1981, p. 169). It has become a sole business for the media masses to fabricate a negative image of Muslims. It has been an agenda of "the media's capability, through repeated news coverage, of raising the importance of an issue in the mind of mass people" (Severin & Tankard, 2000, p. 219).

Abdullah (2015) threw light on how the West perceived Muslims before and after 9/11. Though the Muslims were experiencing the discriminatory behavior of the West long before the event of 9/11. They were subjected to hate crimes and were stereotyped. But post 9/11 retaliation was absolutely atrocious and excruciating. Muslims were considered either terrorists or sympathetic to them. Through his book, Orientalism, Said tried to emphasize how Orientalism contributed to forming the contradiction between West and East, where the West was regarded as superior and the controller of the East and East was considered as the 'Other' for the West. Another important aspect that was highlighted was the role of media to induce the idea of western hegemony and the stereotypical perception regarding Muslims. It was mainly due to the West's desire to rule over and show their political, economic, and cultural dominance over the East.

Joholee (2016) aimed to explain the identification of Muslim men through beards and Muslim women through hijab after post 9/11, giving a negative characterization of Muslims as suspicious and barbaric in the comparative study of Hamid's The Reluctant Fundamentalist and Amy Waldman's The Submission. Through the lens of Said's Neo-orientalism, it was to evoke how Muslims were targeted against racism and Islamophobia, and what was the role played by social media in the portrayal of Muslims and shaping stereotypes. In The Reluctant Fundamentalist, Changez's act of keeping his beard came out to be a discomfort for Westerns while in The Submission, Muslim women seemed to remove their hijab forcefully believing them to be subverted and submissive. The article Time to Address Violence against Women stated that the attacks on Muslims Women in public places were the biggest threat by bigoted strangers (Aziz, 2012). The researcher intended to highlight the Islamophobic mentality against Muslims.

Kennedy (2018) stated the changing beliefs and allegiance of Changez after 9/11. Kennedy transformed from an admirer of the USA to an anti-American and activist. At first, he supported USA's liberal views and worked hard to achieve his American Dream. But later he became the critique of global capitalism. The vulnerable behavior of the USA towards Muslims compelled him to think about the importance of his own national, cultural and religious identity. Western gaze was also a significant aspect of the novel in which the writer identified the hostility and skepticism of the USA towards Muslims, which lead Changez to rethink his beliefs, culture, and his true national identity.

Bibi et al. (2021) found the clash of cultures, an important aspect of the novel from the post-colonial perspective of 'self' and 'other'. It was brought into light through Edward Said's Orientalism which examined the cultural clash between alien societies and how the clash created an impact on the human psyche. The incident of 9/11 had a great impact on Muslims as they were getting considered as others. In fact, due to different identities, a kind of distrust could be seen among Muslims and Americans. As Changez assured the stranger not to be terrified of his beard as it was not a symbol of terrorism or extremism, but a symbol of religious affiliation. Similarly, Changez also suspected the stranger to hide some sort of weapon. This distrust leads us to the uneasy and difficult situations between East and West and their insecurities about each other.

Dorji et al. (2022) viewed Orientalism as the Western concept toward the East as they characterized the East, especially Muslims as the ambassador of terrorism and Islamophobia. This general perception of the West created a biased attitude of people regarding Muslims which Hamid has depicted remarkably in his meta-fictional novel *The Reluctant Fundamentalist*. After the 9/11 attack on USA's World Trade Center, the identity of Muslims became endangered more than ever. Due to the political upheave and unrest rampant throughout the nation, Muslims were being marginalized due to their religious affiliation and identity. The novel has also discussed the injustice of 9/11 on the 'Others' through the character of Changez. Western Hegemony has also been discussed and analyzed as an aspect of Said's Orientalism. As Kellner (11) in an article titled stated that the incident of 9/11 created a drastic change in the political, economic, and cultural inclination of the USA. Through Changez's experience, the novel portrayed a picture of Mighty USA's financial and military power over the world. It exhibited how the USA possessed soft as well as hard power which was referred to as Military power and soft power was to encourage foreigners to adopt American culture and fit into American society. Changez was an absolute example of the victim of soft power in the USA.

3. Methodology

The research conducted is qualitative and interpretive in nature with the implication of Said's theory of Orientalism on *The Reluctant Fundamentalist*. Some of the dialogues of Changez were selected conveniently to get the understanding of the situation.

3.1 Theoretical Framework

Occident, from the Latin word *occident's*, refers to sunset, west, whereas, the Orient, from the Latin word *orientis*, refers to rise, east (Abdullah, 2015; Bhabha, 1994). It may take as a mirror image of the inferior that is other, the alien to the Occident, the West (Gray, 2005; Chibber, 2013; Tshomo et al., 2013). Orientalism is the idea that people in the West make assumptions and judgments about the East without understanding cultural difference (Hartley, 2011; Singh, 2012). It represents the East (especially the Middle East), in a stereotyped way to express a colonialist attitude. Edward Said, in his book *Orientalism*, attempts to evoke the idea of the Western scholars to present the image of the East as menial, revolting and degrading.

In book *Orientalism*, Said (1979) stated that “Orientalism is a style of thought based upon an ontological and epistemological distinction made between the Orient and (most of the time) the Occident” (p. 2). It leads to emphasize the superiority of the Occident and the inferiority of the Orient. “Oriental is as a Western style for dominating, restructuring, and having authority over the Orient” (p. 3). “Orientalism can be discussed and analyzed as the corporate institution for dealing with the Orient” (p. 3).

When the U.S., invaded Iraq to overthrow dictator Saddam Hussein, it gave rise to the formation of jihadist groups, Al-Qaida and ISIS that portrayed a negative image of Muslims of the East as fundamentalists and terrorists and initiated the racist ideology of Islamophobia. The dictionary of Oxford defines fundamentalism as strictly maintaining the ancient doctrines of a religion, especially Islam. In fact, the term fundamentalist arose originally from American Christianity fundamentalism as a belief that considers every word of the Bible to be divinely true. “Doubtless Islam was a real provocation in many ways. It lays uneasily close to Christianity, geographically and culturally” (Said, 1979, p. 74). In spite of that, Islamophobia is a cluster of misconceptions, stereotypes, and racist ideologies. According to Said (1979) as stated in *Orientalism*:

Given its special relationship to both Christianity and Judaism, Islam remained forever the Orientalist's idea (or type) of original cultural effrontery, aggravated naturally by the fear that Islamic civilization originally (as well as contemporaneously) continued to stand somehow opposed to the Christian West. (p. 260)

3.2 Data Collection and Analysis

The data is collected from the literary work of Hamid's (2007) *The Reluctant Fundamentalist* with reference to the dialogues of the protagonist Changez in the novel. The researchers are analyzing those dialogues of Changez that are more likely to explain the Western hegemony and Changez's journey of a struggle for his true identity.

The initial dialogue of Changez to strange American depicts the racist ideology of the West who considers themselves superior and subjugate other races, especially the East. “How did I know you were American? No, not by the color of your skin; we have a range of complexion in this country” (p. 1). Changez is suggesting the idea that a beard is not merely a sign of terrorism for which he received disdainful remarks from the West after the 9/11 incident but evokes an idea that the beard portrays man as a pure observer who seeks significant details out of the artifacts.

“It was your bearing that allowed me to identify you, and I do not mean that as an insult, for I see your face as hardened, but merely as an observation” (p. 2). Therefore, Changez wants to clear this misconception that Muslims speak beyond diversification and racial discrimination.

Changez criticizes the rich spoiled American students vacationing in Greece who behave in a sense of superiority and pride and resemble American imperialism which believes itself right in its action to subjugate ‘other’. “They were in a position to conduct themselves in the world as though they were its ruling class” (p. 24).

Changez makes a joke in order to evoke a sense of agitation in Americans allusively, revealing the ideology of the West that is engrossed in racism and Islamophobia. Besides being a powerful nation, it still finds itself in a position of getting harmed and threatened by fundamentalist, Changez. “I hoped one day to be the dictator of an Islamic republic with nuclear capability; the others appeared shocked, and I was forced to explain that I had been joking” (p. 33).

Beard symbolizes the development of Changez's character, as he told the strange American that he didn't have a beard when he first came to the USA. “Perhaps you misconstrue the significance of my beard which, I should, in any case, make clear, I had not yet kept when I arrived in New York” (p. 61). Beard depicts his identity not as perceived by West as fundamentalist but rather as firm in

his conscientiousness. “It was, perhaps, a form of protest on my part, a symbol of my identity” (p. 148). West views the East in the tone of Erica’s father that the Orientals are extremists and lack nationalism and when Erica’s father remarks on Pakistanis as fundamentalists. “But his tone—with, if you will forgive me, its typically American undercurrent of condescension”(p. 148). Changez responds in a polite but firm manner that what he thinks about Pakistan is not at all true but rather an exaggeration created by the West. “Yes, there are challenges, sir, but my family is there, and I can assure you it is not as bad as that” (p. 63).

The colonialist attitude of Occident to subjugate Orient is noticeable from the incident when on a trip to Manila, Changez was subjected to racism by a jeepney driver who gazed at him in a way that makes him feel like he was not one of them, mainly due to his skin color. “Only a few feet away, the driver of a jeepney returning my gaze. There was an undisguised hostility in his expression” (p. 76). Changez delineates the kind of distress and malice he gained from West after the traumatic incident of 9/11. He was suspected because of the difference in skin color and even the racial discrimination did not allow him to keep a charioteer.

Being of a suspect race I was quarantined and subjected to additional inspection; once admitted I hired a charioteer who belonged to a serf class lacking the requisite permissions to abide legally and forced, therefore, to accept work at lower pay. (p. 178)

After the 9/11 attack, the attitude of the USA took a malevolent turn against the East and initiated the racist ideology of Islamophobia. They were being targeted on the basis of skin color and beard and abused verbally as well as physically. “At the airport, I was escorted by armed guards into a room where I was made to strip down to my boxer shorts” (p. 85). “When we arrived, I was separated from my team at immigration. They joined the queue for USA citizens; I joined the one for foreigners” (p. 85). Even Changez’s colleagues left him at the airport alone showing the change in behavior of the USA where he was brutally disgraced. Changez was left to feel like an alien or other. As soon as, Changez kept a beard, the attitude of the people around him changed at once. Those who admired him for being the best employee later stared at him with hate and resentment. “I was subjected to verbal abuse by complete strangers, and at Underwood Samson, I seemed to become overnight a subject of whispers and stares” (p. 148). Though, he did not show any infidelity towards the USA but rather was subjected to bear the fundamentalism of the USA. The amount of hatred he observed in the eyes of his colleagues, did not bother to bid farewell when he was leaving. “I realized how deep was the suspicion I had engendered in my colleagues over these past few—bearded and resentful—weeks” (p. 181). Edward Said has rightly proclaimed this attitude of the West to represent Orient is due to stereotypical beliefs and prejudice. Said (1979) in *Orientalism* stated that Orientalism was such a system of truths, truths in Nietzsche's sense of the word. It is therefore correct that every European, in what he could say about the Orient, was consequently a racist, an imperialist, and almost totally ethnocentric (p. 204).

After the attack on the World Trade Center, Muslims were considered terrorists and attacked violently by the people of the West. They were taken into account for interrogation and subjected to killings. “Pakistani cab drivers were being beaten to within an inch of their lives; the FBI was raiding mosques, shops, and even people’s houses; Muslim men were disappearing, perhaps into shadowy detention centers for questioning or worse” (p. 107).

The USA started a rage against Afghanistan and began bombing the Afghan tribesmen. “The bombing of Afghanistan had already been underway for a fortnight” (p. 113). It resulted in great havoc in the entire Eastern society as they were tagged as the flag bearer of Islamophobia. This indicates USA’s hubris that carries racism and hegemony. Changez further tries to clear the misconception about Muslims as inferior and dependent on the West for their survival.

For we were not always burdened by debt, dependent on foreign aid and handouts; in the stories, we tell of ourselves we were not the crazed and destitute radicals you see on your television channels but rather saints and poets and-yes-conquering kings (p. 115).

In reality, Muslims belong to a noble race including scholars, poets, and kings who ruled the entire subcontinents. The entire ruckus that USA media misinterpreted was fundamentalism. The USA has always been considered a progressive country. It was known for its pragmatism. But after 9/11, the USA seemed to have become a vindictive and revengeful rival of the Muslims. I had always thought of the USA as a nation that looked forward; for the first time, I was struck by its determination to look back. Living in New York was suddenly like living in a film about the Second World War (p. 131). The exploitation of the Muslims clearly depicts the USA ideology regarding the East. “I had heard tales of the discrimination Muslims were beginning to experience in the business world—stories of rescinded job offer and groundless dismissals” (p. 137).

Although, Pakistan is a nuclear country but USA’s increasing supremacy and hatred towards Pakistan increased as time passed. “Yes we had nuclear weapons, and yes, our soldiers would not back down, but we were being threatened nonetheless” (p. 145). Changez reveals a colonialist attitude of the USA that indulges itself in any way to suppress weak nations as it invaded Afghanistan in the name of Islamophobia to get its hand on Islamic extremists. “I have always resented the manner in which the USA conducted itself in the world; your country’s constant interference in the affairs of others was insufferable” (p. 177). “I knew from my experience as a Pakistani—of alternating periods of American aid and sanctions—that finance was a primary means by which the American empire exercised its power” (p. 177). It is by Changez’s own experience when he went on American aid to achieve his American dream and unveil the real face of the West that utilizes its power to subjugate the East. Consequently, exercising a political ideology to maintain its power structure.

The USA has fallen back into its own misconceptions about Islam and racism, gaining sympathy from the World with regard to terrorist attacks and massive killings by Islamic extremists. In fact, exercising its political power to subjugate the inferior and portray Muslims as an uncultured, barbaric, and menial race. “You retreated into myths of your own differences, assumptions of your own superiority” (p. 190). West, in the name of War on Terror and to put an end to Islamophobia is killing innocents that Changez, further argues to be ceased for the sake of humanity.

The advancement of a small coterie’s concept of American interests in the guise of the fight against terrorism, which was defined to refer to the organized and politically motivated killing of civilians by killers not wearing the uniforms of soldiers (p. 202).

Said (1979) describes the above notion in his book *Orientalism* that the structure of Orientalism is nothing more than a structure of lies or of myths which, were the truth about them to be told, would simply blow away. I myself believe that Orientalism is more particularly valuable as a sign of European-Atlantic power over the Orient than it is as a veridic discourse about the Orient (which is what, in its academic or scholarly form, it claims to be) (p. 6).

Changez’ hatred for the USA was not because of the religion and culture but his unfavorable experiences in the USA. He became a victim of racial discrimination and began to look at himself as a foreigner among the Americans. This contemptuous reaction from the USA brings forth a sense of gratification to Changez on the catastrophic incident of 9/11 in the USA. He remarks: “Yes, despicable as it may sound, my initial reaction was to be remarkably pleased” (p. 83). “The fact that someone had so visibly brought the USA to her knees” (p. 83).

Although, Changez was not in favor of violence and mass murder but, he felt satisfied by the enfeebled situation of the USA’s imperial power. Changez, by the end, wants to clear the misapprehension about East that Muslims are not fundamentality terrorists but have been portrayed

negatively by the false beliefs system of racism and Islamophobia. Important is to understand the cultural and religious differences. “I do not mean that we are all one, and indeed—as will soon become evident to you” (p. 197).

In Orientalism, Said (1979) explained that Orient in general and Islam, in particular, were systems of information, behavior, and belief, that to be an Oriental or a Muslim was to know certain things in a certain way, and that these were of course subject to history, geography, and the development of society in circumstances specific to it (p. 195).

4. Results

The American racism towards Muslims grew too much after 9/11. Beard and hijab (scarf) became a symbol of terrorism. The misinterpretation of the West regarding the East as others is the root cause of racism and inequality. The media is also responsible for this hatred as it shows that whoever keeps a beard is a terrorist and is dangerous and subject to all suspicion and ill behavior.

Islamophobia is an ideology that the West possesses for the East that Muslims are terrorists and they have feelings of hatred, hostility, and discrimination toward Muslims due to their religious or ethnic identities. These ideologies are responsible for the bitter relationship between East and West.

The study has explored that post 9/11 USA became such a rigid and hostile place for Muslims that they were getting detained, interrogated, or even beaten due to their identity as Muslims. They were getting tortured physically as well as mentally and the mental damage caused to the people was much more severe than the physical one. They had to leave their homes and their jobs and even were stripped during interrogation.

The pragmatism of the USA vanished after the incident and it became very difficult for the Muslims to survive the sort of fundamentalism to which they were subjected regularly.

5. Conclusion

The study puts concluding remarks on the ideology of the West to represent the East through the narrative of *Changez* in the literary work of *The Reluctant Fundamentalist* by Hamid, which is merely based upon false assumptions about Islamophobia and Muslims as fundamentalists and terrorists. It has resulted from the racial discrimination and colonialist attitude of the West that falsifies a negative image of the East on the basis of appearance and color without recognizing their cultural differences. Hamid states that there is a constant battle between the West and East from cultural perspectives as well as postcolonial aspects. West looked down upon the East as inferior and blames them for being extremists. Althusser mentioned in his essay *Ideology and Ideological State Apparatuses*, ideology seems to be established in institutions and practices confined to them. It is precisely mentioned in apparatuses and the practices confined to them.

As Said stated in *The Myth of the Clash of Civilizations* that it is an injustice to victimize an entity due to one's own experiences. Also, people used to fight for ideas over us versus them, virtue and vice, belonging and not belonging. It is Islam that is not invariable like the West. This clearly shows that USA's accusations are not true and are based on exaggeration and hate towards the East.

6. Limitation of the Study

The limitations of the study are as follows:

1. The research is conducted on the literary work of Hamid's *The Reluctant Fundamentalist* in the light of the theoretical framework of Orientalism by Said.
2. The study is limited to the character of Changez.
3. Through the dialogues of Changez, the researcher tries to interpret the Western Ideology regarding the East and its consequences on both nations.

7. Suggestions

1. It paves the way for future researchers to conduct research on understanding the West from the perspective of the east.
2. It provokes how the ideologies are misused by powerful superior nations to suppress the weaker ones and to look over the misconceptions different nations have about each.

8. References

- Abdullah, M. A. S. (2015). Muslims in pre- and post-9/11 contexts. *International Journal of Comparative Literature and Translation Studies*, 3(3), 52–59. <https://doi.org/10.7575/saiac.ijclts.v.3n.3p.52>
- Bhabha, H. K. (1994). *The location of culture*. London and New York: Routledge.
- Bibi, S., Waheed, D. A., & Khan, N. U. (2021). Study of Cultural Clash in Hamid's *The Reluctant Fundamentalist*. *Elementary Education Online*, 2021, 20(2), 1381–1386. <https://doi.org/10.17051/ilkonline.2021.02.158>
- Chibber, V. (2013). *Postcolonial theory and the spectre of capital*. London & New York: Verso.
- Deleuze, G. & Gattari, F. (2000). *Anti-Oedipus: Capitalism and schizophrenia*. 10th printing. Translated from the French by R. Hurley, M. Seem, and H. R. Lane. Minneapolis: University of Minnesota Press.
- Drabinski, J. (2019). Frantz fanon. *Stanford Encyclopedia of Philosophy*. <https://plato.stanford.edu/entries/frantz-fanon/>
- Fanon, F. (1967). *Racism and culture*. Columbia University. https://blogs.law.columbia.edu/revolution1313/files/2021/09/Fanon_Frantz_Toward_the_African_Revolution_1967.pdf
- Goonetilleke, D. C. R. A. (1998). *Salman Rushdie*. London: Macmillan.
- Gray, J. B. (2005). Althusser, Ideology, and Theoretical Foundations: Theory and Communication. <https://www.ibiblio.org/nmediac/winter2004/gray.html>
- Hamid, M. (2007). *The reluctant fundamentalist*. London: Penguin.
- Harper, D. (n.d.). Etymology of ideology. *Online Etymology Dictionary*. <https://www.etymonline.com/word/ideology>
- Hartley, L. P. (2011). *The Go-Between*. London: Penguin.
- Hutcheon, L. (1988). *A poetics of postmodernism: history, theory, fiction*. New York & London: Routledge.
- Joholee, O. A. G. (2016). Representations of bearded Muslim men and hijab-wearing Muslim women in post-9/11 fiction: A study of Hamid's *the reluctant fundamentalist* and Amy Waldman's *the submission*. <https://studentrepo.iium.edu.my/handle/123456789/6809>
- Kennedy, V. (2018). Changez/Cengiz's changing beliefs in the reluctant fundamentalist. *CLCWeb: Comparative Literature and Culture*, 20(6). <https://doi.org/10.7771/1481-4374.3321>
- Nietzsche, F. (1969). *On the genealogy of morals*. New York: Random House.

- Nurullah, A. S. (2010). Portrayal of Muslims in the media: “24” and the ‘Othering’ process. *International Journal of Human Sciences*, 7(1), 1021–1045. <https://doi.org/http://www.insanbilimleri.com/en>
- Said, E. W. (1979). *Orientalism: Western conceptions of the Orient* - PDF drive. <https://www.pdfdrive.com/orientalism-western-conceptions-of-the-orient-e159561228.html>
- Scanlan, M. (2010). Migrating from terror: The postcolonial novel after September 11. *Journal of Postcolonial Writing*. 46, 3–4, 266–278.
- Singh, H. (2012). Insurgent Metaphors: Decentering 9/11 in Mohsin Hamid Hamid’s *The Reluctant Fundamentalist* and Kamila Shamsie’s *Burnt Shadows*. *ARIEL: A Review of International English Literature*. 43, 1, 23–44.
- Tshomo, T., Yonten, S., Yangzom, & Dorji, P. (2022). Deconstruction of the novel 'The reluctant fundamentalist' in the light of Edward Said's orientalism. *Journal of Sociological Research*.
- Vietta, S. (2013). *A theory of global civilization: Rationality and the IR*. Goodreads. <https://www.goodreads.com/book/show/38224226-a-theory-of-global-civilization>

Exploring Students' Misconceptions and their Causes in Photosynthesis and Respiration: A Case Study of a Private Sector School of Sukkur, Sindh, Pakistan

Khola Anwar¹, Roshan Ali², Azmat Qadeer¹, Khan Zada²

¹MPhil Student

²Sukkur IBA University, Sukkur, Sindh, Pakistan

Corresponding author's email: kholaanwar.10@gmail.com

Abstract

This study aims to discover the misconceptions about photosynthesis and respiration processes and their causes among students at the elementary level. When students join the classrooms, they have a lot of misconceptions/ alternative ideas based on their previous understanding, learning experiences, and observation of their surroundings. The concepts are built at the very first, where children construct their knowledge by observing the world. These ideas, beliefs and observations make their preconceptions. This research has been conducted to discover misconceptions about respiration and photosynthesis and their causes. The nature of this research study was an exploratory case study of a private school in Sukkur, Sindh. Semi-structured interviews and unstructured observations are done to conduct the data for this research study. This research is conducted in higher secondary schools in Sukkur, Sindh. The research participants were two elementary school teachers (one male and one female) and 8th-grade students. The sample size for this research was eight students in class eight and two science teachers. Four girls, four boys, one female and one male teacher, were selected for data collection. It was determined that students needed to learn about photosynthesis and respiration processes.

Keywords: *Misconceptions, Respiration, Photosynthesis, Alternative ideas*

1. Introduction

Ideas, notions, and events that help us understand the world and reality are considered concepts (Eggen et al., 2007). Misconceptions and alternative conceptions are the ideas that provide an incorrect understanding of concepts and scientific ideas, which are based on individual perception, non-scientific beliefs, preconceived notions, and experience (Martin et al., 2001). Conceptions could be classified into two categories, i.e., misconceptions and preconceptions. Misconceptions are misunderstandings that have arisen as a result of previous formal education. On the contrary, preconceptions are beliefs formed due to experiences in ordinary life (De Corte & Weinert, 1996). Misconceptions occur when students do not understand a scientific concept accurately and provide a mistaken explanation. According to Piaget, children seek meaning in their interactions with the world around them (see: Eggen & Kauchak, 2004, p.281).

Children apply what they have learned to test and improve existing schemas. Children build up conceptions about the world when they experience what happens when they hit objects or push or pull anything (Driver et al., 2014). Various factors can lead to the formation of misconceptions in science. Most secondary science lessons consist of different topics, i.e., Plant and human growth, respiration, photosynthesis in plants, pulling and pushing forces, and living and non-living things.

These are the experiences children face in their daily lives, and these experiences leave traces in children's minds. Based on it, children construct many intuitive ideas about the world surrounding them (Kuhn, 1989). Only some experiences lead to the proper conclusion or allow children to view all possible outcomes. The main sources of misconceptions are the media, teachers, textbooks, parents, etc. Misconceptions can be caused by various factors, including misinterpreting accurate information or receiving contradictory information from trusted sources such as parents and instructors. It is challenging to change the misconceptions because students need to accept the new knowledge and unlearn the previous one.

1.1 Research Questions

The research questions of the study are (a). Do students hold misconceptions about respiration and photosynthesis process? (b). What is the nature of students' misconceptions about respiration and photosynthesis? (c). What are the causes of misconceptions in Science?

2. Review of Literature

Misconceptions are concepts that are different from the understanding of scientific concepts (Cordova et al., 2014). Several studies on scientific misconceptions have been implemented, and this study belongs to them to create a biological framework for my studies. According to the literature, the nature of Science is intangible, and it is very challenging to teach and explain its concepts due to its nature. Students also find difficulties in understanding science. Most teachers are using theoretical methods while teaching and consider rote memorization subjects. Inappropriate teaching and learning methods cause misconceptions in science. According to (Burgoon et al., 2011), a teacher who has misconceptions cannot elicit students' misconceptions and causes new misconceptions. The complexity of the scientific topics and non-visible topics are causes of misconceptions (Sesli & Kara, 2012). These are unscientific statements learned through experiences, teachers, or other sources (Baysen et al., 2012).

To put it another way, misconceptions are the incompatibility between the scientific concepts and the definition created by the children in their minds (AKGÜN et al., 2005). Misconceptions and alternative conceptions are the ideas that provide an incorrect understanding of concepts and scientific ideas which are based on individual perception, non-scientific beliefs, preconceived notions, and experience (Martin, 1998). Misconceptions are erroneous concepts, beliefs, ideas, and thoughts usually created by experiences, or misunderstanding the scientific concepts (Suwono et al., 2021). The conceptions are categorized into two groups, i.e., misconceptions and preconceptions. Misconceptions are misunderstandings that instigate due to prior formal education, and preconceptions are conceptions that result from informal experiences (De Corte & Weinert, 1996). Various factors are responsible for preconceptions, i.e., social, religious, economic factors, etc., and these factors are called exogenous factors. Another is endogenous factors that originate from the individual's psychological and biological characteristics. Children's preconceptions are stable, and it is difficult to diminish their preconceptions rapidly. Children have a cognitive level of beliefs and conceptions defined as quality and quantity; children learn from their surroundings

through all the senses. Every new experience contributes to concept formation. Children tend to observe nature and phenomena from their views and lens.

On the other hand, if children do not understand the scientific concept or ideas properly, they give false information (Driver & Easley, 1978). This happens when children form a symbiosis with new content but cannot scratch their previous misconceptions from their minds, and their previous understanding of the topic remains unchanged. Learning something new depends on the interaction between the previous knowledge and the new knowledge that is acquired (Vosniadou, 1991). Misconceptions are created when gaps between the new knowledge and previous knowledge and when previous information is not activated. Misconceptions can also be formed due to personal experience, poor articulation, or textual errors (Bukowski, 1995). Another issue arises when children believe their concepts are correct and do not want to accept the teacher's explanation (Minstrell & Smith, 1983). Teachers sometimes have misconceptions because they are not well-trained or unfamiliar with their subject matter knowledge. Misconceptions survive for years and are taken for granted without any critique from generation to generation. Elicitation of misconceptions is not simple.

Photosynthesis and respiration are major scientific concepts covered in many countries' curricula and from lower grades up to higher grades. Due to the complexity of topics, children have many misconceptions about these topics. Many studies are conducted to explore students' misconceptions about Science, especially about photosynthesis and respiration. It is considered the most challenging topic for students to understand at lower and higher levels (Stavy et al., 1987). It is widely believed that plants only acquire their sustenance from the soil. There are many misconceptions about photosynthesis and its relation to the respiration process (Amir & Tamir, 1994).

On the other hand, some students consider respiration to be the same as breathing (Bishop et al., 1985). Urey (Mustafa, 2018) conducted a study exploring conceptions and misconceptions of pre-service teachers on photosynthesis and respiration in plants. There are many studies exploring students' misconceptions on several complex scientific topics. This study (Kubiatko & Prokop, 2018) investigated students' misconceptions about mammals. Many studies have been conducted to explore students' misconceptions about the classification of animals based on their structures. Another study (Shepardson, 1997) explores misconceptions about the life cycles of insects. A meaningful learning of the photosynthesis process helps students to understand the other concepts of the biology i.e. matter, energy and their conversion from one form to another from is easily. Photosynthesis and respiration processes are overlapping so students do comparative studies of both these topics for better understanding (Akpinar, 2007). Pre-service teachers had misconceptions about the biochemical and chemical processes of photosynthesis (Skribe Dimec & Strgar, 2017).

The teaching methods that teachers used in the classrooms are traditional and teacher-centered (Rao, 2003). Students are trained to be rote memorizing facts and figures rather the inquiry-based teaching. Due to this, students are failed to apply the scientific concepts in daily life situations (Yip, 2001). Students retrieve the memorized information during the examination. The reason behind

this is a lack of awareness of the teaching theories and practices. Another reason for didactic teaching is the huge syllabus of science and the focus of teachers is to complete it within given time constraints.

2.1 Conceptual Change in Science

The role of teachers is to elicit students' ideas and change their misconceptions and preconceptions with accurate scientific concepts. This process involves discarding the previous knowledge and developing and reorganizing the new knowledge. Piaget believed that cognitive conflict is the cause of disequilibrium and that, with maturation, misconceptions would fall by the wayside (Piaget, 1977). Learning in Science is the gradual process of children's pre-existing knowledge being enriched and restructured (Kuhn, 1989). Children's intuitive ideas are anchoring conceptions (Clement et al., 1989) on which new knowledge is constructed. Another research (Spelke, 1991) argues that preexisting knowledge is elaborated with experiences, but fundamental principles are not replaced. Fundamental principles play a significant role in the process of learning. Prior knowledge in the form of naive beliefs is a common component of children's misconception of science.

Representational Redescription (RR) model presented by (Karmiloff-Smith, 1994), children's initial knowledge about the world helps them understand the world and interact with objects. They can accomplish it without any 'theories,' explanations, or knowledge that has been imparted to them. As a result, their implicit knowledge serves as the foundation for development, which entails reorganizing the information more explicitly.

3. Methodology

3.1 Methodological Orientation

Qualitative research helps us to examine the phenomena. Any theory will be generated through this research method, in which the researcher uses small samples for data collection. In the qualitative method, the researcher aims to understand how people think, feel, and understand the reality experienced by the research participants. In which researchers do not have a preconceived idea or hypothesis about the natural events and how it is unfolding during the research (Sorensen, 2021). A qualitative research method is used when the purpose of research is to explore, describe or explain phenomena (*The Practice of Qualitative Research 2nd by Hesse-Biber, Sharlene Nagy, Leavy, Patricia L. (Lina) (2010) Paperback, 2021a*).

In Science, the reason behind choosing qualitative methodology is to explore students' conceptions and misconceptions about Science. It will help to explore students' misconceptions without the researcher's views or choices. Data collection tools are tallied with qualitative research methodology. The second reason is the epistemological stance, such as interpretive, in which the nature of research is subjective. The third reason is the ontological stance. As per this, knowledge is constructed and shaped by people's experiences. Furthermore, the findings of this research study

will not generalize to the other context. Moreover, this research's exploratory case study approach explores students' conceptions and misconceptions about science and its causes.

3.2 Exploratory Case Study as a Research Design

This study is an exploratory case study of a private school in Sukkur. In this research design, multiple methods are used for data collection, i.e., interviews and unstructured classroom observations. In this type of research, an individual, group, or program has a 'Unit of Analysis'. This research had an elementary Science classroom as a unit of analysis. This study allowed gaining an in-depth understanding of students' conceptions and misconceptions of Science and how these affect students' learning. Moreover, this study also highlighted the causes of misconceptions in Science. This research is a snapshot case study conducted over a short period.

3.3 Data Collection and Analysis

Data was collected for this research through semi-structured interviews and unstructured classroom observations.

Three types of interviews are structured, unstructured, and semi-structured, but in this study, semi-structured interviews were used as a data collection tool. Semi-structured interviews are based on open-ended questions in which the researcher asks a question, and the participant has space to answer it in detail. Semi-structured interviews help to get an in-depth and explicit understanding of the participant's views (Edwards & Holland, 2013a). It directed them to ask prompt questions to the students to give them a proper direction and get a deeper understanding. After collecting data through semi-structured interviews, the interviews are translated, transcribed and analysed. English, Urdu, and Sindhi languages are used for the students' ease in interviews.

Unstructured classroom observations were used to describe what goes, who, and what involves in a particular setting (Jorgensen, 1989). It helped to observe the teaching of teachers and the student's misconception when they ask questions from teachers or vice versa in the classroom. The researcher's presence in the classroom disturbs the classroom environment, and the researcher cannot observe what they want, but it is ensured to maintain the classroom environment. Rapport was built with students and class teachers before conducting semi-structured interviews after unstructured classroom observation.

Thematic analysis was chosen for the analysis of research data. It is applied to the interview transcript. It helped to examine data to find common themes, especially similarities and relationships between different chunks of data. Audio-recorded interviews of participants were translated and then transcribed into English, then made codes from the data and organized systematically. After that, made a pattern from the coding of the transcripts and identified the themes from the repeated coding. Then themes were discussed in detail.

4. Results and Discussion

In this part of the research, the findings are presented systematically. This part is divided into two sections. In section one, findings of the misconceptions of the students in photosynthesis and

respirations are discussed, while in section two, the causes of the misconceptions are discussed. This first section of the findings answered the first objective of the research, followed by two research questions: Do students hold misconceptions about respiration and photosynthesis and what are misconceptions? The second section answered the second objective, which was about the causes of misconceptions and followed by one research question: "What are the causes about misconceptions in Science?"

4.1 Section I: Misconceptions in Photosynthesis

The semi-structured interviews are conducted with the students to elicit the students' misconceptions about the photosynthesis process. Students needed clarification about this concept area of Science. Students need to be made aware that photosynthesis and respiration occur in plants. They considered that photosynthesis is plants' respiration, meaning the respiration process does not occur. Like humans respire through these different organs, plants do not respire like humans. However, for inhaling and exhaling gasses and fulfilling the energy requirements, students believed that they do the process of photosynthesis.

L1; "In plants the respiration process does not occur but at that place, they do the process of photosynthesis."

L2; "Respiration and breathing are only occurring in animals and photosynthesis occurs in plants. Plants take gasses during photosynthesis that are utilized for the process of Respiration."

Participants classify the animals and plants on behalf of respiration and photosynthesis, respectively. Furthermore, they needed help to differentiate these two processes effectively. Misconceptions arise due to the overlapping of both concepts.

L3; "Photosynthesis occurs only in higher plants."

L3 stated that photosynthesis occurs only in higher plants and it is absent in bacteria, algae, etc.

It is concluded that students need to be more accurate with these two concepts of photosynthesis and respiration. They considered that photosynthesis only occurs in higher plants, and this process does not occur in bacteria and algae. They made this interpretation because they see plants in their surroundings and cannot see the bacteria and algae due to their minute size. Hence, teachers must clear all the concepts in science by telling them different examples. This was also noticed in the unstructured observations that teachers should have given examples of an organism in which photosynthesis occurs. They do not use thought-provoking questions before the start of the lecture, which activates the student's prior knowledge.

Moreover, students needed to distinguish the nature of the gasses that plants take and take out during the photosynthesis process. Some students gave vague responses, as our parents restricted us from going under the trees at night because there was a ghost. So, these misconceptions arise when we listen to a story or myth from our elders.

4.2 Dark and Light Reaction

Students needed clarification about light and dark reactions in the process of photosynthesis. They considered that dark reactions occur in plants at night and light reactions occur during the day.

L1; *“Due to the unavailability of sunlight at night time the dark reaction occurs to fulfil the need of plants.”*

L2; *“we can say dark and light reactions on the basis of day and night. Dark reactions occur at night time in the same way, light reactions during day time.”*

While conducting semi-structured interviews and unstructured observations, it is noted that participants respond to the question based on the terminologies, i.e. light and dark reactions. They have yet to learn the exact phenomena behind it. Hence, it was concluded that students make their understanding of the scientific concepts based on the terminologies. They were unable to comprehend scientific concepts. This was a finding that should have been discussed in the literature.

4.3 Respiration and Breathing

The theme is presented under the sub-theme consumption of gasses into the body.

L1; *“Respiration is a process that defines how we inhale air.”*

L2; *“So respiration is the process of the inhalation of gasses, like how we inhale the gasses and exhale the gasses through the lungs.”*

When they were asked separately about breathing, they defined it as the process of inhaling and exhaling gasses and the same answer they gave when asked about respiration. However, these are not similar processes. Breathing is the physical process, and respiration is the chemical process. On the other hand, some students consider respiration to be the same as breathing (Bishop et al., 1985). Furthermore, in observation, it was noted that teachers needed to differentiate these two terms separately. According to the literature, the same misconceptions were found: students need to differentiate between these two processes (Oztas, 2012).

4.4 Consumption of Gasses

L1; *“Humans only take Oxygen and release carbon dioxide in their body.”*

L2; *“Tiny hair of the nose filters other gasses and provides pure oxygen to our lungs for survival.”*

Seven out of eight participants stated that our body only takes one gas (Oxygen) and releases (carbon dioxide). Moreover, they said the body consumes full oxygen, and there is no ratio of oxygen gas during exhalation. They considered that tiny hairs in the nose of humans separate the other gases present in the atmosphere, and only the body takes the oxygen. Carbon dioxide forms from the oxidation of food, which mixes in the blood, and the exchange of gases occurs in every organ of the human body (Badenhorst et al., 2015). They considered the body's different organs as part of the respiratory tract. Such kind of misconceptions arises when teachers did not demonstrate the process in the classroom properly.

L1; *“Plant takes only carbon dioxide and releases oxygen day and night.”*

L2; *“Plant only takes in air which means oxygen.”*

It is concluded that in plants photosynthesis process occurs. This produces oxygen with the consumption of carbon dioxide and that oxygen that humans use. During the unstructured

observations and interviews, it was revealed that students could not properly differentiate the photosynthesis and respiration processes.

4.5 Heart, Food Pipe, Intestine Parts of the Respiratory Tract

Research participants believed that the heart, food pipe, and small intestine are parts of the respiratory system. Research data found that students mixed the organ of the respiratory tract and other organs of the body.

L1; "Heart, food pipe, small intestine are the parts of the respiration because the heart is the main organ that pumps blood towards our lungs and we can inhale gasses through the mouth that moves into our lungs through the food pipe."

L2; "Breathing and respiration occur in all parts of the body, so all organs are part of the respiratory system."

Participants believe that the heart is the main organ for respiration; the food pipe also contributes to respiration, and through the small intestine, the inhaling and exhaling of gasses occur; that is why these are the parts of the respiratory system. In the same way, they consider the intestine part of the respiratory tract because blood takes oxygen and releases carbon dioxide from food. Students considered that the food pipe and windpipe are the same pipes from which humans swallow food and take gasses for respiration (Harman, 2012). Moreover, it was found during the unstructured observation that teachers needed to give a clearer understanding of the respiration topic and the organs involved in it. They should make differences between the functions of the other organs with the organs of the respiratory tract.

Section II: Causes of Misconceptions

4.6 Pedagogical Content Knowledge

Pedagogical knowledge means the knowledge about different teaching and learning strategies teachers use during teaching and learning. Subject knowledge does refer to the knowledge of a related subject a teacher teaches in the classroom; it is also called content knowledge.

L1; "Lack of subject matter knowledge is one of the causes of misconceptions."

L2; "Teacher only delivered the lecture and did not address all the questions of the students and did not use different teaching strategies due to shortage of time."

The teacher did not use inquiry-based, game-based teaching and learning in the classroom and could not address all the students' questions due to the class's limited time, and they had to cover the course.

L1; "Irrelevant examples coded by teachers are one of the causes of misconceptions."

L2; "Use of different strategies like puppetry, animated videos are the causes of misconception and few children do not want to change their misconceptions because they heard from their beloved person."

The teachers' pedagogical and subject knowledge impacts the students' concepts regarding photosynthesis and respiration. Teachers' lack of pedagogical and subject matter knowledge creates

misconceptions in the students regarding respiration and photosynthesis. From observation, it was noted that non-science background teachers were also teaching science in the classroom. Literature and survey also support this point. About 91% of teachers are from non-science backgrounds (The tribune,2019). Teachers needed to gain more knowledge about the strategies for teaching science subjects. They needed to make proper objectives for the classroom and be aware of the objectives of the science topics mentioned in the science curriculum. However, it is explicitly described in the science curriculum how to teach a topic and how to assess that specific topic. Student learning objectives and benchmarks are defined very well in the science curriculum. The teaching methods teachers used in the classrooms are traditional and teacher-centered (Ebenezer et al., 2010). Students are trained to be rote memorizing facts and figures rather the inquiry-based teaching. Due to this, students are failed to apply the scientific concepts in daily life situations (Yip, 2001). Didactic teaching in science is dominant in Pakistan.

L1; "Language barrier is another cause of misconceptions because teachers cannot translate all concepts in different languages.

It was noticed that teachers convey their ideas and lecture in their mother tongue and slightly use the English language. Students in the classroom have different languages, so they need help understanding the lecture. Due to language issues, teachers did not convey the message in a scientific language causing misconceptions in science.

4.7 Educational and Cultural Backgrounds

Educational background does mean here the prior educational experiences of the students. The schools and the content students studied. Cultural background means the background of students with different norms, traditions, and values they developed historically from the society where they live.

L1; "Students who come from government schools hold misconceptions because of non-qualified subject matter teachers."

L2; "Cultural values are also responsible for misconceptions. Parents tell-tale to children which are also the reasons for alternative concepts about the things."

Both backgrounds of the students impact the concepts of the students. Schooling standards, the students build their knowledge of students accordingly, and cultural norms, values, and practices also build students' knowledge from different perspectives. From observation, it was noted that students with a good educational background participate in the classroom very well and ask questions of the teachers. Students from good schooling backgrounds had different experiences and fewer misconceptions because well-educated teachers were recruited in their schools and had a variety of learning materials.

Cultural values are also the main cause of misconceptions in science because children listen to stories and myths from their elders. Many misconceptions and myths are embedded in those stories, and children assimilate that knowledge into their schema, which is resistant to change with new phenomena. Sometimes, students' previous concepts are inadequate and do not allow them to accommodate the new knowledge in their minds (p.212). Conflict arises between the new

knowledge and previous knowledge of the children. It was concluded from the teachers' responses that those students who came from a good educational background performed well in the classroom compared to those from public sector schools. Because their teachers usually do not teach in the classroom, there needs to be better checks and balances on the performance of teachers and students.

4.8 Study Materials and Sources

L1; "Students follow websites where erroneous information is given which are the main causes of misconceptions and books must be updated where all the things mentioned clearly and differentiate the concepts."

L1 stated that there is quite a difference between the books taught in the private sector and the books of the government sector schools. The books are black and white. It did not grab the attention of students, and it did not motivate them to study. Hence, many things still need to be updated in the books, and for students who read the other books, conflict arises between the things they read from the two different books and hence many chances of misconceptions. However, during observation, it was noted that students did bring study material like books in the classrooms and few students did not purchase it yet. This is the obvious thing causing misconceptions because it was difficult to grasp the concepts of intangible phenomena without pictorial representation from the book and study material. Students need more lab apparatus to perform experiments. They just read the experiments from the books and lab practicals and memorize them without doing them practically, which is the main cause of misconceptions. It was also concluded from the literature that lack of experiments and the wrong relationship between textbooks and the thoughts of students are reasons for misconceptions (Södervik et al., 2014).

This study is concerned with finding misconceptions among children about photosynthesis, the respiration process, and its causes. One participant stated, "I cannot explain why I said that dark reactions occur at day time. But frankly speaking, I was not really convinced with these concepts that why it happens in day time." these examples addressed that misconceptions cannot be eliminated by telling them facts and simply stated that this is a wrong concept and this is the right concept. (Tamayo Alzate & Sanmartí Puig, 2007). It is a long-term procedure in which interventions are given to students to replace their false knowledge with the right scientific knowledge. Moreover, they said that even after reading the books, some students were still confused. They cannot distinguish which concepts are right and which are wrong. This is because sometimes children get the concepts from their beloved person, and they have blind trust in that person, which restricts children from replacing the false knowledge. The literature revealed that some of the misconceptions arise from the textbooks and sometimes from the poor illustration of the concepts and examples from the teacher's side (Fensham et al., 1994). One study finding affirmed the above notion "that air is necessary for photosynthesis", which was used in the textbooks, and many students gave the same responses. A misconception found in this regard, i.e. that oxygen is absent, so the photosynthesis is stopped; they could not discriminate which oxygen or carbon dioxide is necessary. Students were unable to describe the role of chlorophyll in the

energy conversion process in photosynthesis (Métoui et al., 2016). One of the studies found out that photosynthesis occurs in higher plants, and the data obtained from the participants also gave the same answer that photosynthesis does not occur in lower plants, bacteria, and algae (Mustafa, 2018). Another finding which was found in previous studies is that individuals had misconceptions about the input and output of the respiration and photosynthesis processes (Akçay, 2017). However, this study also finds out the causes of misconception in Science, and the previous studies needed to be more focused on it.

7. Conclusion

The exploration of the understanding of students about two scientific concepts, photosynthesis and respiration, unveiled many misconceptions and vague understanding at the elementary level. From the responses, themes were extracted based on the similarities and differences in the students' understanding. There were two types of themes that were aligned with the objectives of the research. In the first section, themes about photosynthesis and respiration were made after coding and analyzing the patterning of the student's responses. In section two, the teachers' responses generated themes about the causes of misconceptions in science. From the participants' data, it was concluded that students needed more knowledge about these two scientific concepts. Due to the overlapping of these two topics, students needed more clarification. They need the answers in proper scientific terminologies of these two topics. Many misconceptions were highlighted in respiration as the consumption of gasses from plants and animals. Students were confused that respiration processes do not occur in plants. They consider that respiration occurs in animals and photosynthesis occurs in plants only.

Moreover, they considered that respiration occurs in every organ of the animals and where the exchange of gasses from the blood takes place. According to this understanding, they considered that the heart, the kidney, and the intestines are the parts of the respiratory tract. Most of the students needed to have identified the breathing and respiration process. Similarly, they needed to be more aware of taking in and out of the gasses in the respiration and photosynthesis process.

Students gave the responses in their language without using the correct scientific terminologies about respiration and photosynthesis processes. It depicts that teachers needed to use the correct terminologies while defining the concepts during classroom lectures. It was also noticed during the classroom observation that the teacher needed to use proper scientific terminologies. From the demographic information of the teachers, it was determined that teachers were from non-scientific backgrounds and a few teachers only gave papers of bachelor in science without taking regular classes.

8. References

- Akçay, S. (2017). Prospective elementary science teachers' understanding of photosynthesis and cellular respiration in the context of multiple biological levels as nested systems. *Journal of Biological Education*, 51(1), 52–65.
- Akpınar, E. (2007). THE EFFECT OF DUAL SITUATED LEARNING MODEL ON

- STUDENTS' UNDERSTANDING OF PHOTOSYNTHESIS AND RESPIRATION CONCEPTS. *Journal of Baltic Science Education*, 6(3).
- Anjum, N. A. Z., & Nasreen, A. (2013). An Exploration of Students' Misconceptions about the Concept 'Classification of Animals' at Secondary Level and Effectiveness of Inquiry Method for Conceptual Change. *Ankara University Journal of Faculty of Educational Sciences (JFES)*, 46(2), 195–214.
- AKGÜN, A., GÖNEN, S., & YILMAZ, A. (2005). Fen bilgisi öğretmen adaylarının karışımların yapısı ve iletkenliği konusundaki kavram yanılgıları. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 28(28), 1–8.
- Amir, R., & Tamir, P. (1994). In-depth analysis of misconceptions as a basis for developing research-based remedial instruction: The case of photosynthesis. *The American Biology Teacher*, 56(2), 94–100.
- Baysen, E., Güneşli, A., & Baysen, F. (2012). Teaching and learning concepts and misconceptions: Science and Turkish teaching cases. *International Journal of New Trends in Arts, Sports and Science Education*, 1(2), 108–117.
- Betkowski, M. (1995). *Misconceptions—their importance in the learning of science*. New York: Sage publication.
- Bishop, B. A., Roth, K. J., & Anderson, C. W. (1985). Respiration and photosynthesis. *A Teaching Module*. East Lansing, MI: Institute for Research on Teaching, Michigan State University.
- Burgoon, J. N., Heddle, M. L., & Duran, E. (2011). Re-examining the similarities between teacher and student conceptions about physical science. *Journal of Science Teacher Education*, 22(2), 101–114.
- Chi, M. T. H. (2009). Three types of conceptual change: Belief revision, mental model transformation, and categorical shift. In *International handbook of research on conceptual change* (pp. 89–110). Routledge.
- Chinn, C. A., & Brewer, W. F. (1993). The role of anomalous data in knowledge acquisition: A theoretical framework and implications for science instruction. *Review of Educational Research*, 63(1), 1–49.
- Clement, J., Brown, D. E., & Zietsman, A. (1989). Not all preconceptions are misconceptions: Finding 'anchoring conceptions' for grounding instruction on students' intuitions. *International Journal of Science Education*, 11(5), 554–565.
- Cordova, J. R., Sinatra, G. M., Jones, S. H., Taasoobshirazi, G., & Lombardi, D. (2014). Confidence in prior knowledge, self-efficacy, interest and prior knowledge: Influences on conceptual change. *Contemporary Educational Psychology*, 39(2), 164–174.
- De Corte, E., & Weinert, F. E. (1996). *International encyclopedia of developmental and instructional psychology* (Vol. 6). Pergamon.
- Driver, R., & Easley, J. (1978). *Pupils and paradigms: A review of literature related to concept development in adolescent science students*.
- Driver, R., Squires, A., Rushworth, P., & Wood-Robinson, V. (2014). *Making sense of secondary science: Research into children's ideas*. Routledge.

- Ebenezer, J., Chacko, S., Kaya, O. N., Koya, S. K., & Ebenezer, D. L. (2010). The effects of common knowledge construction model sequence of lessons on science achievement and relational conceptual change. *Journal of Research in Science Teaching: The Official Journal of the National Association for Research in Science Teaching*, 47(1), 25–46.
- Edwards, R., & Holland, J. (2013). *What is Qualitative Interviewing? (The “What is?” Research Methods Series)* (Annotated ed.). Bloomsbury Academic.
- Eggen, P. D., Kauchak, D. P., & Garry, S. (2007). *Educational psychology: Windows on classrooms*. Pearson/Merrill/Prentice Hall.
- Fensham, P. J., Gunstone, R. F., White, R. T., & White, R. T. (1994). *The content of science: A constructivist approach to its teaching and learning*. Psychology Press.
- Herrenkohl, L. R., Palincsar, A. S., DeWater, L. S., & Kawasaki, K. (1999). Developing scientific communities in classrooms: A sociocognitive approach. *Journal of the Learning Sciences*, 8(3–4), 451–493.
- Jorgensen, D. L. (1989). *Participant Observation: A Methodology for Human Studies (Applied Social Research Methods)*. SAGE Publications, Inc.
- Karmiloff-Smith, B. A. (1994). Beyond modularity: A developmental perspective on cognitive science. *European Journal of Disorders of Communication*, 29(1), 95–105.
- Kubiatko, M., & Prokop, P. (2018). Pupils’ understanding of mammals: an investigation of the cognitive dimension of misconceptions. *Orbis Scholae*, 3(2), 97–112.
- Kuhn, D. (1989). Children and adults as intuitive scientists. *Psychological Review*, 96(4), 674.
- Liu, X. (2009). Beyond science literacy: Science and the public. *International Journal of Environmental and Science Education*, 4(3), 301–311.
- Martin, R. E. (1998). *Science for all children: Methods for constructing understanding*. Allyn & Bacon.
- Martin, R. E., Sexton, C. M., & Gerlovich, J. A. (2001). *Teaching science for all children*. Allyn and Bacon.
- Minstrell, J., & Smith, C. (1983). What Research Says: Alternative Conceptions and a Strategy for Change. *Science and Children*, 21(3), 31–33.
- Mustafa, U. (2018). Defining the relationship between the perceptions and the misconceptions about photosynthesis topic of the preservice science teachers. *European Journal of Educational Research*, 7(4), 813–826.
- Métioui, A., Matoussi, F., & Trudel, L. (2016). The teaching of photosynthesis in secondary school: A history of the science approach. *Journal of Biological Education*, 50(3), 275–289.
- Mustafa, U. (2018). Defining the relationship between the perceptions and the misconceptions about photosynthesis topic of the preservice science teachers. *European Journal of Educational Research*, 7(4), 813–826.
- Oztas, F., & Oztas, H. (2012). Biology teacher candidates’ alternative conceptions about the human respiration and source of metabolic energy. *Ener Educ Sci Tech-B*, 4, 749-756
- Piaget, J. (1977). *The development of thought: Equilibration of cognitive structures. (Trans A. Rosin)*. Viking.

- Richardson, J. T. E. (1999). The concepts and methods of phenomenographic research. *Review of Educational Research*, 69(1), 53–82.
- Sadrudin, M. M., Khawaja, M., & Zafar, S. (2017). Attitude Of Prospective Teachers Towards Scienceexploring Teachers Preparedness In The Subject Area Of Science Education At Teacher Education Level In Sindh, Pakistan. *Grassroots*, 50(3).
- Sesli, E., & Kara, Y. (2012). Development and application of a two-tier multiple-choice diagnostic test for high school students' understanding of cell division and reproduction. *Journal of Biological Education*, 46(4), 214–225.
- Shepardson, D. P. (1997). Of butterflies and beetles: First graders' ways of seeing and talking about insect life cycles. *Journal of Research in Science Teaching: The Official Journal of the National Association for Research in Science Teaching*, 34(9), 873–889.
- Skribe Dimec, D., & Strgar, J. (2017). Scientific conceptions of photosynthesis among primary school pupils and student teachers of biology. *CEPS Journal*, 7(1), 49–68.
- Škoda, J., & Doulik, P. (2007). Children's concepts research of selected common phenomena from physics and chemistry at elementary schools. *Problems of Education in the 21st Century*, 1, 106.
- Södervik, I., Mikkilä-Erdmann, M., & Vilppu, H. (2014). Promoting the understanding of photosynthesis among elementary school student teachers through text design. *Journal of Science Teacher Education*, 25(5), 581–600.
- Sorensen, D. A. L. C. J. C. (2021b). *Introduction to Research in Education*. Wadsworth, Cengage Learning. *The Practice of Qualitative Research 2nd by Hesse-Biber, Sharlene Nagy, Leavy, Patricia L. (Lina) (2010) Paperback*. (2021). SAGE Publications, Inc.
- Sorensen, D. A. L. C. J. C. (2021c). *Introduction to Research in Education*. Wadsworth, Cengage Learning.
- Spelke, E. S. (1991). Physical knowledge in infancy: Reflections on Piaget's theory. *The Epigenesis of Mind: Essays on Biology and Cognition*, 133–169.
- Stavy, R., Eisen, Y., & Yaakobi, D. (1987). How students aged 13-15 understand photosynthesis. *International Journal of Science Education*, 9(1), 105–115.
- Suwono, H., Prasetyo, T. I., Lestari, U., Lukiati, B., Fachrunnisa, R., Kusairi, S., Saefi, M., Fauzi, A., & Atho'illah, M. F. (2021). Cell biology diagnostic test (CBD-Test) portrays pre-service teacher misconceptions about biology cell. *Journal of Biological Education*, 55(1), 82–105.
- Tamayo Alzate, O. E., & Sanmartí Puig, N. (2007). High-school Students' Conceptual Evolution of the Respiration Concept from the Perspective of Giere's Cognitive Science Model. *International Journal of Science Education*, 29(2), 215–248.
- Tsai, C.-C. (2003). Taiwanese science students' and teachers' perceptions of the laboratory learning environments: Exploring epistemological gaps. *International Journal of Science Education*, 25(7), 847–860.
- Vosniadou, S. (1991). Designing curricula for conceptual restructuring: Lessons from the study of knowledge acquisition in astronomy. *J. Curriculum Studies*, 23(3), 219–237.

- Warwick, D. P., & Reimers, F. (1995). *Hope or despair? Learning in Pakistan's primary schools*. Greenwood Publishing Group.
- Williams, M., Vogt, W., & Vogt, P. W. (2011). *The SAGE Handbook of Innovation in Social Research Methods (Sage Handbooks)* (1st ed.). SAGE Publications Ltd.
- Yip, D. Y. (2001). Promoting the development of a conceptual change model of science instruction in prospective secondary biology teachers. *International Journal of Science Education*, 23(7), 755–770.

Leaders as Instructional Managers: An Exploration of Challenges Faced by Head Teachers Appointed through IBA Sukkur

Sayeda Sumbul shah¹, Shakeel Ahmad², & Adil Hussain Ghani²
¹MPhil

²Education and Literacy Department, Government of Sindh.
Corresponding author 's email: sayedasumbulkazmi@gmail.com

Abstract

The role of the school principal as an instructional leader is very important for achieving the excellence and effectiveness of the school. Pakistan National Education Policy (2017) in which the main objectives are to greatly increase the development of educational supply in the education system. The document states that all school-level leaders (headmaster, headmistress, principal, vice principals, deputy principals, and teachers) are required to perform their leadership functions effectively. There are some factors which slow down instructional leadership practices. Therefore, this study aims to identify some challenges being faced Head Teachers Appointed through IBA Sukkur. Whereas, qualitative research method along with case study research design has been adopted. The participants for this study are nine newly appointed principals who had led their school for not more than one year. The data has been analyzed by using thematic analysis technique.

The finding of this study revealed that newly appointed principals are facing some cruel challenges which slow down the instructional leadership practices such as lack of experience and knowledge about instructional headship, lack of resources like material and human resources, the socio-economic status of parents, and bureaucratic influence and irresponsible and Inappropriate behavior of staff. Moreover, this research suggests that the Government of Pakistan should take proactive steps to overcome these challenges and difficulties faced newly appointed head teachers along with providing the sufficient funds to schools for improving teaching and learning process. The study results led to the practical implications of improving instructional leadership practices in the Pakistani school context. Moreover, this is the first Qualitative study of its nature which is conducted in Sindh province of Pakistan and focuses on the Challenges Faced by Head Teachers Appointed through IBA Sukkur.

Keywords: *Instructional leadership, Challenges, Principals, Instructional Managers*

1. Introduction

In the current scenario of education, instructional leadership practices are assessed similarly and play a crucial role in the development of the institute (Rajib, 2020). In earlier studies instructional leadership focuses mainly on, improving achievement that enhance school credibility (Ghavifekr et al, 2017). Therefore, it is considered the most studied model of leadership that is analyzed in the region of institute leadership and management (Daniels, Hondeghem & Dochy, 2019). Instructional leadership is considered a current and emerging trend under research as compared to other studies such as European countries, the United Kingdom, and the United States which had inspected the effectiveness of instructional leadership within their educational systems (Hallinger & Walker, 2017; Rigby, 2014).

Hence Asian countries are paying attention to the effectiveness of instructional leadership. However, instructional leadership inspected wide attention in the field of school leadership. Research of (Nguyen, 2017) critically posited that there is adequate evidence that a decentralized educational setup dominates the area of instructional leadership, contrarily, there is less information on the concept of guidance through centralized learning which is not widely followed. Moreover, the development of the institute depends upon the leaders, if they are not facing problem the institute develop and run properly. But there are some issues and challenges which slow down the instructional practices of leaders the study of Wieczorek & Manard (2018) highlighted that inexperienced principals struggle in implementing instructional leadership practices and fail to manage due to a number of reasons such as lack of experience, less understanding of the role of instructional leadership (Shaked, 2018), lack of resources also create hurdles in managing school's finance (Boakye & Ampiah, 2017).

Similarly, (Arrieta & Ancho, 2020) highlighted that newly appointed head teachers are perceiving their role as instructional leaders as overwhelming, shocking, and stressful. Admittedly, several studies have been done on the role of the principal as an instructional leader in different schools at different levels such as primary, secondary, and college levels. Though, there are few studies has been done on the obstacles and challenges faced by principals while performing their role as an instructional leader and paid little attention to the Pakistani context of the education system. However, there are several studies related to the challenges faced by principals from a western context and little attention has been given to the challenges and barriers faced by Pakistani principals. Therefore, more research is needed to explore the barriers and challenges faced by Pakistani middle school principal's especially young principals, to deal with the challenges they are facing as instructional leaders in their schools. To address the above-mentioned gaps in the problem related to principals' instructional leadership, this qualitative research attempts to explore the difficulties and obstacles faced by secondary principals when implementing their practices as instructional leaders in the school setting. This study helps to explore and understand the barrier and challenges which may slow the effective process of instructional leadership within schools in Pakistan. Hence, internal and external factors have been identified which might slow the principals' instructional leadership role in the school setting.

1.1 Problem Statement

Instructional leadership is considered as a current and emerging trend under research in European countries such as the United Kingdom, and the United States which had inspected the effectiveness of instructional leadership within their educational systems (Hallinger & Walker, 2017; Rigby, 2014). Additionally, Asian countries are also paying attention to the effectiveness of instructional leadership. However, in low economic countries including are facing some challenges that slow down the practice of instructional leadership in the school setting. Previous studies highlighted some reasons which affect negatively the performance of instructional leaders in schools such as the influence of bureaucrats (Walker, 2017), the socio-economic

status of parents (Baker, Sandrs & Morawska, 2017), lack of knowledge and experience about instructional leadership (Rahman et al, 2020), and less coordination with staff (Ghavifekr, et al, 2019) are some major issues. Similarly, Wieczorek & Manard (2018) affirmed that instructional leaders are facing difficulties while leading their roles.

Despite the importance of instructional leadership in education, the education system of Pakistan is not paying much attention to practice instructional leadership practices in schools. Hence, Pakistan stands in the 160th position in terms of the international education ranking. Therefore, various policies have been developed such as “National Education Policy 1947 to 2015” to improve the education system of Pakistan. The 2017 report presented by Alif Ailan, revealed that there is improvement in the education sector of Punjab and KPK, while the situation in Sindh, Baluchistan, and FATA is still not improved. Moreover, Younas and Rasged (2019) highlighted one major issue, especially in the context of Sindh schools are missing not only good leadership but also instructional leadership, Teachers are promoted to the position of head teacher based on seniority, though the promoted head teachers do not have enough experience of leading the school (Zarif and Gorchani 2018).

Hence, schools are facing problems in terms of designing courses, making extracurricular and co-curricular activities, managing resources, enhancing the participation of the community, and developing teaching staff professionally. These head teachers are even unaware of the necessary material for students learning (Zarif and Gorchani 2018). Thus the government assigned the appointment and training procedure to SIBA Testing Service (STS) a subsidiary of Sukkur IBA University., nearly 900 head teachers were shortlisted for the job. These head teachers were given training on their roles and responsibilities before actually going to perform in the field. Hence, this research will explore thoroughly the challenges and obstacles faced by principals which are least favored within instructional leadership context and literature. Additionally, this study will help newly appointed principals in finding strategies and solutions to the problem they are facing while performing their role as instructional leaders.

2. Literature Review

The literature review consists of Instructional leadership, Instructional leadership practices, and Challenges faced by instructional leaders, focusing on the different research studies, reports.

2.1 School Leadership

The quality of education is an essential factor for the development of any country and the quality of education depends on the performance and capabilities of educational leaders (Salo et al., 2015). Hence, researchers put great emphasis on the effectiveness of school leadership (Yuliandri & Kristiawan; 2018). School leadership is the process of leading and guiding the learning experiences of students and also the capabilities of teachers, students, and the community to achieve the desired educational outcomes (Hillinger & Hosseingholizadeh, 2020). The whole system of the school depends upon school leaders (Hallinger and Wang, 2015). Additionally, principals are seen as school leaders, they play various roles in schools

such as academic, and financial, additionally, () highlighted that school principals also play the role of community mobilizers in which they keep contact with community-related for school improvement (Glanz et al., 2017). In addition to this, they empower the community in decision-making and also get suggestions and help from the community to solve problems (Hanraj, 2020). The focus of their role is to enhance the teaching-learning experiences of students to achieve educational objectives (DAHRI, 2015). However, the global interest of education is to develop students learning and teachers professionally and it can be possible when the school principal became an instructional leader (Pashiardis and Johansson, 2020).

2.2 Instructional Leadership in Schools

The conceptualizing instructional leadership has different meanings elaborated in literature by previous studies such as Leithwood, Harris and Hopkins (2020) define instructional leadership as the efforts taken by principals to enhance the progress of students such as arranging resources required for learning, setting school vision and mission, focusing capacity building of teachers and enhance cooperation and relationships of teachers and analyzing teacher supervision and evaluation. Similarly, Leaf and Odhiambo (2017) posited that Instructional leadership is the characteristics of leadership practices which consist of attitude, behavior, action, and practices that lead to the effectiveness of teaching and learning. Likewise, the simple definition given by (Nkibi) 2018 is teaching and learning practices under the supervision of instructional leaders such as the professional development of teachers and the intellectual, and academic development of the students. Similarly, Salo et al., (2015) elaborate that Instructional leadership is one of the styles of leadership in which leader perform their duties as the school principal, mostly focusing on promoting best practices in school so that students can improve their learning to survive in the world. (Ng et al., 2015; Pan et al., 2017). However Green, (2018) highlighted another role of instructional leaders is to maximize the community and parents' involvement for the betterment of the school. Hence, the effectiveness of educational institutions depends upon the performance and capabilities of an instructional leader (Nguyen et al, 2015).

2.3 Instructional Leadership Practices

Instructional leadership practices commonly involve the provision and training of teaching and non-teaching for professional development, designing curriculum, syllabus, and courses and observing the teaching process, and providing feedback to teachers (Harris et al, 2017). Similarly, Walker & Qian (2020) posited that the principal as an instructional leader helps teachers in process of developing course outlines and syllabi for students with the mutual consensus of all teachers. likewise, Velarde, (2017) highlighted that instructional leadership facilitates curriculum designing and other tasks such as setting goals and objectives, monitoring the significance and sequence of activities, and selecting the course book for students after mutual discussion with teachers and experts. Additionally, another practice of instructional leaders is rewarding motivating beyond salary providing training results in drastic improvement

in performance and teaching effectiveness (Yuliandri, kristiawan; 2018). Principals as instructional leaders are charged with the responsibility to treat and maintain equity, and equality among students and provide quality education (DAHRI, 2015).

Hence, to do this the leader has to develop the motivation and skills of his team keeping in view the diversity of the students' (Shaalvik, 2020). According to existing literature instructional leaders should have a grip on these four qualities such as clear vision and decision-making, redesigning Organization, capacity building of teachers, managing educational programs, and policy-making (Leithwood et al., 2020). Additionally, as it is the era of digitalization and most institutes are shifting their mode of education from traditional to online (Mukhtar et al., 2020). Hence is the key role of instructional leaders to promote online learning and enhance the 21st-century skills of staff and students as well (Hooge and Honingh 2014). Furthermore, research conducted over 1663 teachers in Germany found that instructional leadership had a key effect to implement online education in schools (Pietsch et al. (2016). Similarly, another study done in the USA, Turkey, Denmark, and Germany highlighted that instructional leader plays a vital role to implement digital learning and promote 21st-century skills in any institute (Goddard et al. 2015).

Meanwhile, Hooge and Honingh (2014) emphasized that there is a need for more research and studies to prove the connection specifically between online teaching, leadership styles, and collaborative policies in inclusive schools. In an educational context, instructional leaders play two different roles, first is personal and the other is academic role, in the personal role, the leader motivates teachers and students and makes a friendly environment where every individual can share their problems easily, and in an academic role, the instructional leader focuses on the professional development of staff and academic development of students (Kidmann, 2017). Hence, effective instructional leadership needs time for managing the assigned tasks on daily basis, such as running the school system and bringing the community to collaborate with the school (Skaalvik, 2020). Additionally, it is also the role of the instructional leader to make school a peaceful and secure learning place, so that students can be involved in all relevant activities (Kidmann, 2017). The instructional leader is also responsible for the job satisfaction of staff by giving them appreciation, incentive and praise when they perform well and critically evaluating performed tasks, identifying weak areas, and striving for improving their skills and knowledge (Earl & Fullan, 2011).

2.4 Promoting Teaching and Learning Environment

Van Deventor and Kruger (2003) defined teaching and learning environment as, the strategy of teaching and learning mentions the behavior of the school's leaders, head of the department (HODs), teacher, parents, and society to the teaching and learning, and present the quality value of teaching and learning as well. Similarly, Manasseh (2016) define learning environment as the behavior and traits of educators and attitudes of students towards the learning and teaching methods, the motivation, and enthusiasm of commitments in institutes or college that comes via the group and team effects of a great school management system, work behavior of teachers,

the personal properties of students, identifiers into the student's life at home, educational factors and other community. Likewise, (Gunawan, 2017) defined, that it is of utmost responsibility of the leader of a school that he or she should transform the culture within the school into a new, innovative, and full of excellent resources to enhance the teaching and learning environment. Mainly, environment and school norms mirror the characteristics, morals, behaviors, and beliefs of all staff and subordinate members (Manaseh, 2016).

Additionally, according to Nkibi (2018) leadership that is instructional looks for improving the quality of teachers in the work environment to enhance learners' accomplishments or to improve respective personality traits and behavior for institutes or school jobs. However, (Owings, and Kalin 2003) defined, that it is the utmost responsibility of a leader of a school that he or she should transform the culture within the school into a new, innovative, and full of excellent resources to enhance the teaching and learning environment. Bringing a change in their personal lives and giving birth to new teaching and learning process. While (Alam, 2012) highlights another key factor of the teaching and learning environment and the power of decisions and problem-solving skills that can positively enhance teaching and learning environments in any school and the motivation of the staff for the betterment of the organizations. These strategies not only improve the outcomes and motivation of the staff but are also helpful for students' motivation, performance, and learning outcomes. Dealing with and motivating them for various policy changes (Pambudi & Gunwan, 2019).

2.5 Challenges Faced by Instructional Leaders

While implementing their role as instructional leaders' principals are facing numerous challenges which need to be addressed because these challenges might effective instructional leadership practices, some of the challenges are highlighted here such as the high income of teachers (Johnson et al, 2004), lack of resources such as funding (Owens, 2018) and less competent staff are also some barriers faced by instructional leaders (Buchs et al, 2017). Additionally, Wieczorek and Manard (2018), highlighted, lack of staff coordination, lack of knowledge about instructional leadership; tough and heavy workloads are some other issues that principal face in their career. In conceptualizing principals' barriers and obstacles are characterized into two categories first one is personal lack of knowledge skills and attitude to be an effective leader (Buchs et al, 2017). External, less interest of staff in professional development and instructional leadership competencies are the major issues faced by instructional leaders (Rahman et al, 2020). Additionally, community involvement and lack of parental support is also an issue for instructional leaders Baker, (Sandrs & Morawska, 2017). The heavy workload is also a challenge that slowed the practices of instructional leaders in schools (Heffernan, 2018). Hence, most of the time instructional leaders spend most of their time handling school matters, paperwork, and communication via mobile or the internet which creates hindrances to effective instructional practices (Wieczorek and Mansard, 2018).

Sometimes principals couldn't implement instructional leadership practices effectively because of insufficient management, lack of cooperation among staff, and weakness in formulating

strategies are also some noble issues (Kallestad, 2010). However, Rahman et al, (2020) highlighted another factor is the lack of training related to how to perform instructional leadership practices effectively. Hence, these are more important for newly appointed head teachers who have less experience (Mestry, 2017). As students are concerned, instructional leaders are facing challenges in terms of increasing minority enrolments (Grigg, 2012; Maxwell, 2014), students face issues related to understanding and communication in a second language because that is not their primary mood of communication (Cline, Crafter & Prokopiou, 2014), most of the student belong to blow average threshold of the income level (Haig, 2014), bullying and cyber bullying's repercussions on school and private life (O'Brennan, Waasdorp & Bradshaw, 2014), and to maintain the constructive work environment at school premises (Kallestad, 2010). Moreover, Oduro (2003) highlighted the scarcity of resources, inadequate staff are the major challenge being faced by instructional leaders in Africa which affect job satisfaction and employees' motivation.

Similarly, in Ghana lack of facilities in classroom infrastructure resulted in dissatisfaction and turnover of teachers (Louis, 2007). Research done by the Council of Children with Behavior Disorder and cited by Albrecht, Johns, Mounstevan, and Olorunda (2009) found that the absence of updated and suitable textbooks, materials, and lack of access to required material as some of the reasons for their frequent switching of the job as a result of emotional frustration. Most schools in Nigeria face a paucity of basic facilities like electricity, piped water, staff room, and toilets. Ngithi (2013) identified shortcomings faced by administrative staff in the primary school of the Embakasi district of Kenya. Moreover, five other challenges faced by school head teachers are related to promoting change, improving teachers' instruction style, evaluation, and policy implementation of research-based practices. (Wieczorek, D., & Manard, C. 2018). The literature proposes that leadership is inspirational but simultaneously a challenging experience too (Weindling & Dimmock, 2006). At the beginning of their career as some head teachers, they faced a lot of challenges (Hobson, 2003). Furthermore, Hubson (2003) stated that although Headteachers have different educational backgrounds but yet they face the same problems in their teaching profession that are related to school infrastructure, academic planning, financial issues, etc.

3. Methodology

In this study qualitative research design has been utilized to evaluate the assumptions of philosophy for epistemological and ontological theory (Crotty, 1998), which is endorsed by principles of interpretivist and epistemological constructivism, it holds the idea that reality is multiple, subjective in nature, and multifaceted (Creswell, 2017) correspondingly. Additionally, a case study research design has been used, case study is considered to be a comprehensive analysis of any event/circumstance (yin, 2017). Hence, the case study was best suited to developing a comprehensive understanding and exploring the challenges faced by instructional leaders while performing their roles. Additionally, the data has been optioned through semi-structured interviews from the sample of nine newly appointed head teachers' in public schools

in Sindh. One of the purposes of a semi-structured research interview is to reveal the opinions of the interviewees about the phenomena related to the objectives of the research. The researcher can ask investigative questions based on the situation and the responses of the people interviewed (Van Teijlingen, 2014).

Hence, in this type of interview researcher try to find out what an individual perception and beliefs underpinned phenomena (Van Teijlingen, 2014). The topic was explained and discussed with principals before the conduct of the interview. Moreover, Creswell (2012) suggested that to report properly and cover most of the aspects of any phenomenon the number of participants may be ranging from (1) to thirty (30) or forty (40). Hence, the purposive sampling technique has been used to identify the challenges of newly appointed head teachers who can provide the appropriate data within the scope. The purposive sampling technique comprised newly appointed head teachers who apply instructional leadership practices to bring the quality of education to their schools. Kozleski (2017) also highlighted that a Purposeful sample is the best technique to understand participants' perspectives and points of view. While the gathered data has been coded and analyzed by using a thematic analysis strategy. Thematic analysis is the way to identify, analyzing, finding and reporting patterns and themes within data (Braun & Clarke, 2006).

Table 1. Demographic Representation of Principals

SNo	Participant's identity code	Age	qualification	Gender
01	PR 1	42	Master's degree	Male
02	PR 2	38	Master's degree	Male
03	PR 3	32	Master's degree	Female
04	PR 4	45	Master's degree	Male
05	PR 5	51	Master's degree	Male
06	PR 6	38	Master's degree	Male
07	PR 7	36	Master's degree	Male
08	PR 8	29	Bachelor degree	Female
09	PR 9	31	Bachelor degree	Female

Based on Table 1, four principals were females while the other five were male, in terms of principals' academic qualifications only two principals have a bachelor's degree, and the rest had master's degree qualifications in different areas. Different identity codes have been given to principals which are mentioned in table 1

4. Results

The interview provides a great opportunity to listen to the different professional and experienced responses of the principal. The nine (9) responses of principals were found impressive to produce authentic primary data for this study to analyze as explorative and then to produce themes. The responses of principals were kept confidential as per the agreement done before conducting interviews. The important informative said explorative were recorded, selected and

coded, to use for the analysis of the study consisting of exploring some challenges faced by instructional leaders in the province of Sindh, Pakistan.

4.1 Teachers Lack Experience and Knowledge

Teachers hold central and significant positions in instructional leadership. The responses from the interviewees informed teachers' lack of experience and knowledge as instructional leaders. The responses of the interviewees highlighted a number of views about experience and knowledge pertaining to instructional leadership.

As the first PR (3) said, I faced problems in performing the role of principal because I was appointed directly as principal after completing my master's degree. So, I faced difficulties to implement policies and curriculum effectively. This statement revealed that inexperienced principals face difficulties to implement policies and curriculum effectively so experience can play a crucial part in the effective implementation of school policies and curriculum. Moreover, PR-5 shared his views, "Due to lack of professional development, especially in the field of instructional leadership, I faced some difficulties because when we were newly appointed we thought these trainings were not that much important, so sometimes I did not prefer to attend trainings or in case I attended I could not pay attention on it". In light of this statement, it can be said that professional development, especially in the field of instructional leadership is quite important to make better decisions for the smooth functioning of the institution. In addition, another respondent, PR-7, said, "As I have no idea about the practices of principalship, so, it was a bit challenging for me to manage internal and external resources effectively". This statement reflects that there are different challenges internal and external and for effective leadership practices to run some institution principals should have previous experiences that play a key role in making decisions and can handle different situations accordingly. One more respondent, PR-8, shared, "I have done my master's degree in Marketing, so it was challenging for me to work in a school with irrelevant qualifications". According to this statement, it can be understood that irrelevant qualifications have an effect on the productivity of an individual.

4.2 Lack of Resources

Sufficient and proper resources contribute to the effectiveness of the school. The responses from the interviewees informed lack of resources in schools is a big obstacle faced by instructional leaders. The responses of the interviewees highlighted various views about the lack of resources affecting instructional leadership.

For instance, "I faced problems to manage insufficient human resources such as shortage of teachers, and other lower staff such as clerks and peons (PR-4 and PR-7). From this statement, it can be understood that insufficient staff can negatively affect the productivity of the principal. Moreover, responses to PR-9 revealed, "due to lack of libraries and insufficient science labs are creating hindrance in leadership practices". In light of this statement, we can say that insufficient resources such as science labs and libraries can create difficulties for a leader and negatively affect his output.

Similarly, PR-2 answered that currently, SMC is inactive all over Sindh which creates lots of problems in schools. Especially providing basic needs such as the provision of water, cleanliness of the school, and electricity. We are also facing a problem with physical resources such as furniture chairs benches, whiteboards, and other teaching materials.

This statement, revealed that, timely release of funds can improve the functioning of the school by providing the basic resources, and timely maintenance of the school.

PR-01 held that I'm facing the problem of the insufficient budget provided to schools. In government schools, budget provision is very much low, only 25000 provided per school for the whole year. Now, if we see there are a number of needs in schools, it is very difficult to manage. There are a number of activities, school stationery, celebration days, day-to-day affairs, maintenance of electrical equipment, school furniture repair, sweeping, white-wash, school charts, boards, chalks or markers use on daily basis, and prize distribution, but it is impossible to manage all in this inflation era. From this statement, it can be understood that insufficient funds can further increase the problems for the school leader to meet the basic expenses of their school so he needs to explore other ways such as fundraising from the staff, trust organizations or civil society to meet school needs.

4.3 Lack of Cooperation and Coordination of Teaching Staff

Cooperation and coordination of Staff is a strength for any origination which leads to the overall performance of a school. The responses from the participants revealed a Lack of cooperation and coordination of teaching staff as a major obstacle the responses of the interviewees highlighted a number of views about Lack of cooperation and coordination.

In this regard, PR-6 shared his views, "we do not perform any task as a team due to the lack of cooperation of my teaching staff". This statement shows that cooperation and teamwork were absent in teaching staff. However, PR-5 revealed, "due to lack of teamwork we are deteriorating effectiveness and school culture". The experience of the respondent highlighted that due to a lack of teamwork and cooperation, the performance of the school culture is compromised and reduces productivity.

As PR-01 said that Lack of cooperation among staff is a major problem I'm facing as an instructional leader. Most of the teachers are not cooperating in school activities such as making timetables, distributing the courses/subjects, and arranging parent's teacher meetings, and resistant to implementing new strategies in their classes or school.

The experience of the respondent shows that lack of cooperation among the teaching staff increases pressure on the school leaders, influences his decision, and further creates resistance for him in implementing the policies.

Further PR-03 said that "In my school teacher staff is not ready to take an active part in any cooperation or any task where their help is required, most of the teachers are not regular, even sometimes teachers do not complete their assigned tasks on time such as course completion on time, assessment of the students and not attending any matting such as SMC school. In light of

this statement, it can understand that irresponsible behavior, absence, and non-cooperation of the teaching staff with the school leader further affect the productivity of the school leader.

4.4 The Socio-economic Status of Parents

Parents hold central and significant positions in the academic development of child children which is directly linked affects instructional leadership. The responses of the interviewees highlighted a number of views about the socio-economic status of parents pertaining to instructional leadership. PR-5 shared his views, due to poverty student enrollment ratio decreased". This response shows that poverty directly affects the enrolment ratio and it increases the student's dropout rate.

PR-05 told that "the illiteracy of parents in my school decreased their involvement, they don't cooperate in any matter even if they don't understand the problems of students, they don't give time to their children in helping the child or counselling them etc. Actually, due to their illiteracy, they are unable to help their children. This response revealed that the education of the parents influences the school environment if they are illiterate they are reluctant to interact with the school management or teachers. They also cannot assist or help their children or able to understand their problems.

Moreover, PR-01 said that Illiterate parents break the bridge between school and parents they don't solve issues which students are facing at school or home. Students could not complete homework due to illiterate parents, students' diaries are not checked, and means of communication tool is damaged between teachers and parents.

This response shows the illiteracy of parents, they are unable to track the performance of their children which creates a communication gap between the school and parents. Further, PR-06 maintained that I'm facing a poverty issue, I think poverty is creating a problem because school is incomplete without parents' cooperation, there is a number of activities to be done at school for child development in this regard to financial need even in public school there are no fees but parents have to cooperate in the provision of stationaries, maintenance of copies, pencils, colors, bags, dress cost, pick and drop etc. due to such expenses parents do not allow their children for getting an education, because they are too busy in earning their basic needs, they could not have time or money to think for their children education.

In light of this statement, it revealed that Parents from rural areas are living a marginal life and hardly meet their basic needs, expecting them to fulfil the basic educational needs of children e.g. stationaries, shoes, and dress could be a challenging task for them. Instead of that parents' cooperation is essential for the effectiveness of the school.

4.5 Bureaucratic or Political Influence

In a democratic society, the role of bureaucracy is political and ensure that government decision is implemented properly. In reality, bureaucratic influence plays a negative role in education the responses of the interviewees highlighted a number of views about political influence on instructional leadership and overall school performance.

The interviewee PR-2 shared his view, “Sometimes school buildings are utilized for political and personal usage, especially in rural areas, such as for elections and for personal gathering”. In this line, it can be understood that school buildings are utilized for other than official purposes such as social and political gatherings, especially in rural areas. However, PR-4 shared his views, “the huge portion of funds utilized by bureaucrats which create problem to manage all needs and requirements of the schools.” This statement highlighted that fewer funds were left for the school as the highest portion of funds are utilized by executive officers.

Further, PR-09 maintained that “Most of the time lower of the school staff has been appointed by bureaucrats such as Clerks and peons who do have not sufficient knowledge about their duties even the lower staff is not regular and does not complete their assigned work on time which affects the overall performance of school”. In light of this statement, it is understood that appointments of Non-teaching staff by executive officers were irregular, non-serious, and had less professional knowledge that directly affects the performance of school leaders and ultimately impacts the school operations.

5. Discussion

Barriers, challenges, and obstacles play a significant role to slow down instructional leadership practices and often create the main hindrance to the effective role of principals as instructional leaders. Hence, the literature suggests that principals as school leaders must perform their role as instructional leaders and implement effective practice because they are trusted school leaders in schools that have the responsibility, accountability, effectiveness, betterment, and improvement of overall teaching and learning in school (Leithwood, Harris & Hopkins 2020). While implementing instructional leadership roles principals are facing a number of challenges within the implementation process. In this case, educational authorities expected principals to perform their role as instructional leaders based on innovation and creativity and at the same time solve all the challenges which are hurdles to the betterment of schools. In this qualitative research nine principals highlighted some factors and issues that create hurdles to implementing instructional leadership practices effectively and successfully.

According to their perception and experience Lack of resources, lack of experience and knowledge about instructional leadership practices, the socio-economic status of parents, bureaucratic influence and lack of practices, and responsible and inappropriate behavior of staff are some factors and challenges which create problems in the implementation of instructional leadership practices. Overall, the results of this study coincide with the results of Azlin's study (2006) highlights some factors of principals such as lack of experience, attitudes, and knowledge of school principals causing difficulties for school leaders in exercising their role as effective instructional leaders. Wieczorek & Manard (2018) study, reported that inexperienced school leaders are less proactive, less creative, and innovative in the implementation of their pedagogical leadership. While Rahman et al, (2020) posited that most principals have less knowledge and experience about how to manage internal and external resources and how to enhance the participation and involvement of stakeholders. Similarly, Ali et al, (2015)

highlighted that lack of knowledge about instructional leadership also remains a challenge to principals in the implementation of instructional leadership practices. Due to a lack of knowledge and experience principals are less confident to adopt and practice instructional leadership roles in schools. Moreover, due to a lack of knowledge and experience principal is less focused while encountering challenges and complex tasks while performing their role as instructional leader (Mestry, 2013).

Additionally, another factor that affects the overall performance of instructional leadership practices is the lack of resources. Insufficient resources in Pakistan play a key role to decrease the performance and effectiveness of the school (Ali, 2017). The school lacks the basic facilities such as furniture, drinking water, latrines, buildings, instructional material, and qualified teachers are essential for any institute to function properly (The Nation, 2021). Pakistan does not invest in education (2 percent of GDP, Education Policy, 1998-2010), which is among the lowest rates compared to the 4 percent recommended by UNICEF (Ali, 2017). Hence, lack of funds and insufficient budget provided to schools are additional issues faced by instructional leaders.

Likewise, (Ali, 2017) highlighted that lack of libraries and science laboratories are also some issues faced by school leaders. Additionally, the socio-economic status of parents and bureaucratic influence also plays a cruel role to slow down instructional leadership practices. Previous literature also highlighted that unnecessary interference of stakeholders is also a major challenge for principals. In rural areas, many schools have been constructed without teaching and learning processes, such schools are used commonly for gathering; Autak of Wadera (Asif, 2021). However, Wondimu, (2014) highlighted the issue related to parents like most of the parents are least committed and leave every academic matter to teachers and principals. Additionally, in rural areas most of the parents are uneducated, hence, ignoring the attitude of parents related to their child's education is also a challenge for instructional leaders (Mughal, 2018). Similarly, poverty is the key factor that creates hurdles not only in school but the overall education system (The Nation, 2016).

6. Conclusion

This research aimed to explore the challenges and obstacles faced by principals while performing their roles as instructional leaders. The main concern of this research study aims the research sufficient justifications for why the ideal of an instructional leader can play a significant role in their concerned school and how the challenges and obstacles faced by instructional leaders can slow down the effectiveness of the school. Moreover, in this study, Qualitative research methodology along with a case study research design was adopted for data collection from a sample of nine teachers belonging to Pakistani schools. Furthermore, the data were analyzed by using the thematic analysis technique.

It is based on the authentic, real, and evidence-based findings of the phenomenon and the understanding of instructional leadership and its challenges has been identified. The result of the study revealed teachers' experience and knowledge have been deemed inexperienced

principals face difficulties to implement policies and curriculum effectively so the experience can play a crucial part in the effective implementation of school policies and curriculum. Whereas, Lack of resources is another problem to implement instructional leadership practices effectively. Moreover, the Lack of cooperation and coordination of teaching staff is another issue which slows down instructional leadership practices. In addition to it, this study also highlighted that the socio-economic status of parents also affects the overall performance of schools. The education of the parents influences the school environment if they are illiterate they are reluctant to interact with the school management or teachers. They also cannot assist or help their children or able to understand their problems. However, Bureaucratic or political influence also affects the quality of the school.

8. References

- Ail, N. M. B. M., bin Taib, M. R., Bt Jaafar, H., & bin Omar, M. N. (2015). Principals' instructional leadership and teachers' commitment in three Mara junior Science Colleges (Mjsc) in Pahang, Malaysia. *Procedia-Social and Behavioral Sciences*, 191, 1848-1853.
- Ali, N. (2017). TEACHERS' PERCEPTIONS OF THE RELATIONSHIP BETWEEN PRINCIPALS' INSTRUCTIONAL LEADERSHIP, SCHOOL CULTURE AND SCHOOL EFFECTIVENESS IN SECONDARY SCHOOLS IN PAKISTAN.
- Alsaleh, A. (2019). Investigating instructional leadership in Kuwait's educational reform context: school leaders' perspectives. *School Leadership & Management*, 39(1), 96-120.
- Arrieta, G. S., & Ancho, I. V. (2020). Ready or Not: The Experiences of Novice Academic Heads in School Leadership. *International Journal of Learning, Teaching and Educational Research*, 19(5), 78-98.
- Baker, S., Sanders, M. R., & Morawska, A. (2017). Who uses online parenting support? A cross-sectional survey exploring Australian parents' internet use for parenting. *Journal of Child and Family Studies*, 26(3), 916-927.
- Binti Si-Rajab, S. (2020). The level of instructional leadership practices among principals of National Religious secondary school in Malaysia.
- Boakye, C., & Ampiah, J. G. (2017). Challenges and solutions: The experiences of newly qualified science teachers. *Sage Open*, 7(2), 2158244017706710.
- Buchs, C., Filippou, D., Pulfrey, C., & Volpé, Y. (2017). Challenges for cooperative learning implementation: Reports from elementary school teachers. *Journal of education for teaching*, 43(3), 296-306.
- Daniëls, E., Hondeghem, A., & Dochy, F. (2019). A review on leadership and leadership development in educational settings. *Educational research review*, 27, 110-125.
- Gardner-McTaggart, A. C. (2020). Educational leadership and global crises; reimagining planetary futures through social practice. *International Journal of Leadership in Education*, 1-17.
- Ghavifekr, S., Ibrahim, M. S., Chellapan, K., Sukumaran, K., & Subramaniam, A. (2017). INSTRUCTIONAL LEADERSHIP PRACTICES OF PRINCIPAL IN VOCATIONAL

- AND TECHNICAL COLLEGE: TEACHERS' PERCEPTION. *MOJEM: Malaysian Online Journal of Educational Management*, 3(1), 48-67.
- GHAVIFEKR, S., RADWAN, O., & VELARDE, J. M. (2019). Teachers' Perceptions of Principals' Instructional Leadership Roles and Practices (Persepsi Guru terhadap Peranan dan Amalan Kepimpinan Instruksional Pengetua). *Jurnal Pendidikan Malaysia (Malaysian Journal of Education)*, 44(2), 72-83.
- Green, T. L. (2018). School as community, community as school: Examining principal leadership for urban school reform and community development. *Education and Urban Society*, 50(2), 111-135.
- Gunawan, I. (2017). Instructional Leadership Profile of Junior High School's Principal (A Case Study of Junior High School in Malang). *International Research-Based Education Journal*, 1(1).
- Hallinger, P., & Hosseingholizadeh, R. (2020). Exploring instructional leadership in Iran: A mixed methods study of high-and low-performing principals. *Educational Management Administration & Leadership*, 48(4), 595-616.
- Hallinger, P., & Walker, A. (2017). Leading learning in Asia—emerging empirical insights from five societies. *Journal of Educational Administration*.
- Harris, A., Jones, M., Cheah, K. S. L., Devadason, E., & Adams, D. (2017). Exploring principals' instructional leadership practices in Malaysia: insights and implications. *Journal of Educational Administration*.
- Heffernan, A. (2018). Power and the 'autonomous' principal: Autonomy, teacher development, and school leaders' work. *Journal of educational administration and history*, 50(4), 379-396.
- <https://nation.com.pk/17-Dec-2016/education-inequality-and-poverty>
- Johnson, S. M., Kardos, S. M., Kauffman, D., Liu, E., & Donaldson, M. L. (2004). The Support Gap: New Teachers' Early Experiences in High-Income and Low-Income Schools. *education policy analysis archives*, 12(61), n61.
- Leaf, A., & Odhiambo, G. (2017). The deputy principal instructional leadership role and professional learning. *Journal of Educational Administration*. Oktari, R. S., Shiwaku, K., Munadi, K., & Shaw, R. (2018).
- Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. *School leadership & management*, 40(1), 5-22.
- Manaseh, A. M. (2016). Instructional leadership: The role of heads of schools in managing the instructional programme. *International Journal of Educational Leadership and Management*, 4(1), 30-47.
- Mestry, R. (2017). Principals' perspectives and experiences of their instructional leadership functions to enhance learner achievement in public schools. *Journal of Education (University of KwaZulu-Natal)*, (69), 257-280.
- Mestry, R., Moonsammy-Koopasammy, I., & Schmidt, M. (2013). The instructional leadership role of primary school principals. *Education as Change*, 17(sup1), S49-S64.

- Mughal, A. W. (2018). Investigating the issue of out-of-school children in rural Pakistan: implications for policymakers (Doctoral dissertation, Loughborough University).
- Ng, F. S. D., Nguyen, T. D., Wong, K. B. & Choy, K. W. (2015a). A review of Singapore principals' leadership qualities, styles, and roles., *Journal Of Educational Administration*, 53 (4), 512–533.
- Nguyen, D. T., Ng, D., & San Yap, P. (2017). Instructional leadership structure in Singapore: A co-existence of hierarchy and heterarchy. *Journal of Educational Administration*.
- Owens, A. (2018). Income segregation between school districts and inequality in students' achievement. *Sociology of Education*, 91(1), 1-27.
- Pambudi, B. A., & Gunawan, I. (2019, December). Instructional Leadership as an Effort to Increase Teacher Professionalism in the Industrial Revolution Era 4.0. In *The 4th International Conference on Education and Management (COEMA 2019)* (pp. 216-220). Atlantis Press.
- Rahman, A. R. A., Tahir, L. M., Anis, S. N. M., & Ali, M. F. (2020). Exploring Challenges in Practicing Instructional Leadership: Insights from Senior Secondary Principals. *Universal Journal of Educational Research*, 8(11C), 83-96.
- Rahman, A. R. A., Tahir, L. M., Anis, S. N. M., & Ali, M. F. (2020). Exploring Challenges in Practicing Instructional Leadership: Insights from Senior Secondary Principals. *Universal Journal of Educational Research*, 8(11C), 83-96.
- Rahman, A. R. A., Tahir, L. M., Anis, S. N. M., & Ali, M. F. (2020). Exploring Challenges in Practicing Instructional Leadership: Insights from Senior Secondary Principals. *Universal Journal of Educational Research*, 8(11C), 83-96.
- Rigby, J. G. (2014). Three logics of instructional leadership. *Educational Administration Quarterly*, 50(4), 610-644.
- Rushton, K. (2017). Instructional leadership: The art of asking questions to promote teaching effectiveness.
- Shaked, H. (2018). Why principals sidestep instructional leadership: The disregarded question of schools' primary objective. *Journal of School Leadership*, 28(4), 517-538.
- Skaalvik, C. (2020). School principal self-efficacy for instructional leadership: relations with engagement, emotional exhaustion and motivation to quit. *Social Psychology of Education*, 1-20.
- Stelmach, B. (2020). Rural, secondary school parents' discourses about feeling in community in their children's schools: Insights to shape teachers' and principals' questions. In *Rural Teacher Education* (pp. 203-224). Springer, Singapore.
- Tatlah, I. A., Akhtar, S. N., & Hashmi, M. A. (2019). Effect of Instructional Leadership on Teachers' Performance and Job Commitment: A Comparison of Public and Private Universities of Lahore. *Journal of Educational Research*, 22(1), 133
- Walker, A., & Qian, H. (2020). Developing a model of instructional leadership in China. *Compare: A Journal of Comparative and International Education*, 1-21.

- Wieczorek, D., & Manard, C. (2018). Instructional Leadership Challenges and Practices of Novice Principals in Rural Schools. *Journal of Research in Rural Education*, 34(2).
- WONDIMU, O. (2014). Principal instructional leadership performances and influencing factors in secondary schools of Addis Ababa (Doctoral dissertation, Addis Ababa University).
- Younas, A., Rasheed, S. P., & Sommer, J. (2019). Current situation and challenges concerning nursing education in Pakistan.
- Zarif, T., & Gorchani, A. N. (2018). Study on International Indices and Instructional Leadership Style Of College Principals in The Rural Context of Sindh. *The Journal of History and Social Sciences*, 9(2).

The Gendered Academy: Women's Career Progression in Pakistani Universities

Rabia Ali¹, Mamoona Usman², Muhammad Ilyas Khan³

¹Assistant Professor International Islamic University, Islamabad

²Instructor, Army Public School Rawalpindi

³Associate Professor, Hazara University, Mansehra

Corresponding author's email: rabia.gul@iiu.edu.pk

Abstract

Academy in Pakistan is a gendered space that manifests and nurtures various forms of inequalities. This paper examines women's experiences of working in Pakistani academies focusing primarily on factors influencing their career progression. Data for this paper is drawn from larger qualitative research on the experiences of women in the academy. Phenomenological interviews were carried out with fourteen participants including professors, associate professors, assistant professors, and lecturers from two Public universities in Pakistan. The paper unveils the struggles of women academics in sustaining in the academy due to prevailing gender norms. Several organizational challenges were narrated by the participants including; difficulties in conducting and publishing academic research, discrimination in appointments and promotion practices, workplace favoritism, lack of networking opportunities, and absence of mentors for junior faculty. Resultantly, women professors, irrespective of their ranks, qualifications, skills, and confidence, feel frustrated and find it difficult to contribute effectively to teaching and research. The paper contributes to the global debates on gender inequalities experienced by women in the academy. These findings call for the need for a more gender balanced approach in the academy to include women as equal stakeholders.

Keywords: *Women academics; Faculty Hiring; Pakistani Higher Education; Workload; Career Promotion; Work-Family Conflict; Phenomenological interviews*

1. Introduction

Gender discrimination at workplaces across societies is well documented in academic research (De Paola, & Scoppa, 2015; Satos & Van Phu, 2019; Yousaf & Schmiede, 2017), yet it continues to be a pervasive problem that needs the attention of social science research. Working women around the world often experience workplace inequalities such as discrimination during the hiring process, promotion and salary issues, access to leadership positions, and work-family conflict among others (Cuadrado et al., 2012; Gregory, 2003; Lee & Won, 2014; Luke, 2000; Onsongo, 2004). These obstacles are diverse and differ across institutions. The experience of Pakistani women in the labor force has not been very different from their counterparts in the rest of the world (e.g. Authors, 2021; Fazal et al., 2019; Taj, 2016).

Pakistan, with a population of 220 million, is the 5th most populated country in the world. The literacy rates for men and women are 66% and 40% respectively (Pakistan, 2018-19) and discrimination against women persists in all walks of life (UNICEF, 2006). Women in Pakistan constitute 25% of the labor force (Labour Force Survey, 2017) and they experience low social

status compared to their male counterparts who remain the gatekeepers and the custodian of power. Several religious and cultural factors restrict women's participation in the labor market. For example, women are often expected to practice a certain code of modesty for instance by limiting their mobility and refraining from interaction with males in public spaces (Hussain, 2009). Those who are willing to work, encounter several challenges in gaining access to employment and progressing in their career.

This paper focuses on gender discrimination in the academy. Considering the low position of Pakistan in Global Gender Inequality Index (World Economic Forum 2017), and the widespread gender discrimination in the society rooted in male dominance, gender inequality in academia is not an exception. Scholarship from Pakistan has addressed women's representation in academic leadership positions particularly focusing on challenges and constraints (Authors, 2021; Johnson, 2018; Taj, 2016; Yousaf & Schmiede, 2017). There are few studies that address the issue of work-family conflict and highlight the struggles of women academics in fulfilling their responsibilities as professionals while also juggling their responsibilities of care and domestic chores (e.g. Fazal, et al. 2019). However, further research is needed to understand the complex structural and personal factors that are the root cause of such inequalities in academic spaces.

Hence, this paper is an attempt to contribute to the growing body of scholarly work on women in the academy. Considering the gender inequalities in the Pakistani workforce it aims to examine the experience of working women in Pakistani universities. Do women have equal access to promotions? What kinds of constraints do they encounter in the academic spaces on daily basis? These are some of the questions that remain at the heart of the paper. Hence, this paper will contribute to understanding the working conditions, the challenges, and possible instances of gender bias in Pakistani academia, which remains under-researched. It may help identify new strategies for framing policies that may facilitate women in gaining access to equal resources in the academy. The findings may also offer insight to women who aspire to join the academy in the future and those who are in early career may be exposed to challenges they may expect in the future.

2. Literature Review

At the time of its independence in 1947 the State of Pakistan had only one university and that too was in deplorable condition as the professors who were predominantly Hindu migrated to India. At present, the country has 214 (88 Public and 35 Private) Universities according to the Higher Education Commission (HEC), (2020), which is an autonomous body established in 2002 for the improvement of higher education research and development in the country. However, higher education has been criticized widely due to a lack of qualified and well-trained faculty, student body, funding, and its failure to impart quality education (Hoodbhoy, 2009) resulting in a lack of critical thinking among youth. Government funding has always remained inadequate for Pakistani universities but at present, it is facing a major crisis as the budget was reduced from the US \$300 to the US \$189 in 2019 (Khan, 2019, June 14).

Though gender equality is a contested issue in the country yet the participation of young women in higher education has increased gradually over the years. The numbers of women enrolled in Pakistani universities in Postgraduate Diploma, Bachelors, Masters, MPhil, and Ph.D. programs have been reported to have increased from 101770 to 178723 for women. While the statistics for men have increased from 174504 to 244513 men (Batool, Sajid & Shaheen, 2013). More recently, this has translated into the participation of women in the workforce which was an area previously discouraged (Taj, 2016). Nevertheless, as stated above women experience low social status in the country and are discriminated against at the workplace due to strong masculine hegemony.

The higher education in Pakistan is inspired by the North American System of education and it commences after completion of High School (locally known as intermediate) and is followed by four years of bachelor education. The graduate programs include MS/MPhil and Ph.D. MS/MPhil is of two years' duration and often includes research as an important component. For those who aspire to pursue Ph.D. MS/MPhil is followed by five years of further study including one-year course work (18 Credit Hours), comprehensive examination, and 2 – 4 years of research. Publication of at least one paper in the HEC recognized/indexed journal is a compulsory component of a Ph.D.

Pakistani universities offer two parallel systems of hiring i.e. Tenure Track System (TTS) and the conventional Basic Pay Scale (BPS). Both have advantages and disadvantages. The BPS has a weak appraisal system as there is no penalty or reward for active or non-active researchers and promotions are appointment based. However, BPS is considered more desirable due to its security and offers benefits such as gratuity/pension/house requisition and better leave policy.

The Tenure Track System (TTS) positions in Pakistan closely resembles the North American and Canadian Tenure Track positions where a professor enters as an Assistant Professor after completing a Ph.D. and after 6 years of service, is reviewed for tenure in terms of contribution to research, teaching, and service to the university. Once tenure is awarded they are promoted to the position of Associate Professors. This new system was introduced in the country in 2004 by the HEC to upgrade the research environment in universities but has failed miserably due to a lack of proper implementation (Khan & Jabeen, 2019). In contrast to being secure and prestigious as the case in North America, TTS is considered contractual and most insecure employment in Pakistan. There are issues related to salary revisions, increments, and endorsement at the time of tenure.

Data on the number of men and women faculty on BPS and TTS in Pakistani universities are not available but in general, women occupy very few shares of academic jobs in the country, remain underrepresented in leadership positions, and experience discrimination in selection and promotion processes. Research conducted by Batool et al., (2013) shows that women professors in the country constitute 8.5% against 91.5% men, Associate professors include 8.6% against 91.4% men while Lecturers include 16% women against 84% men (p. 26). This shows the bleak picture of women's representation in the academy and the dismal state of affairs that needs urgent attention.

Scholarly work about women in academia has highlighted organizational, societal and personal factors that potentially challenge working women's career progression by creating obstacles for their advancement in their academic path (Baker, 2003; Santos & Van Phu, 2019). Several

organizational constraints have been argued to hamper women's progression in the academy such as male domination in the workplace, promotion issues, limited mentoring and networking opportunities, and lack of special facilities for females. Mentoring is believed to contribute to the growth of academics and its impact varies with gender. It may be formal or informal. Informal mentoring can be gained through working with people of different grades, participation in different tasks and meetings involving in discussions, and so on (Patterson, 2006). A study conducted by Batool & Sajid (2013) in Pakistan highlighted the absence of mentors as a key barrier by a majority of women managers. This has been identified as an issue since it is argued that men who are in mentoring capacity prefer to mentor men instead of women to avoid getting into scandals of sexual harassment.

Despite the importance of networking in promoting career progression, it remains a challenge for women to break into male networks (Broughton & Miller, 2009). Due to cultural restrictions, some women find it hard to socialize with male colleagues at work. Women tend to feel uneasy with men due to their style of communication including humor and jokes. This excludes women to be part of male networks which is a source of bonding among them (Luke, 2000). Moreover, there is a lack of senior women willing to provide a mentoring facility to younger women and the existing community-based female networks remain nonfunctional proving little help to young women entering the academy (Broughton & Miller, 2009).

Lack of special facilities and policies for women such as inappropriate childcare facilities, lack of restrooms to feed young babies, and maternity leave, have been main challenges for working women (Luke, 2000). In a study conducted in the north of England, 35% of the participants reported daycare being a major hurdle in the way of their career progress (Green, Moore, Easton & Heggie, 2004). The participants in this study were concerned about the quality of care provided in the child care facilities. A study by Blau and Currie (2006) reports the cost of child care as a challenge for working mothers. Likewise, the study of Ruhm (1998) in his study in nine EU countries reports maternity leaves greatly influence employment and wages.

It has also been reported in the literature that women are discriminated against in the academies for recruitment, appointment, and promotion practices (Luke, 2000; Onsongo, 2004). This has largely been argued to be due to the criteria of promotion, inadequate information, and unequal workload distribution (Batool & Sajid, 2013). Furthermore, often male academics are believed to be promoted to higher ranks without merit (Broughton & Miller, 2009; Ely, Stone & Ammerman, 2014; Hamel, 2009; Patterson, 2006; Sabharwal, 2013). Women in initial ranks (i.e. Lecturers, Assistant Lecturers, Teaching Assistants, Research Associates) spend more time in teaching and teaching-related activities and are promoted late in their careers (Santos & Van Phu, 2019).

Additionally, women's progress at work is also restricted due to social factors. Women in academia experience gender stereotyping (Keating, 2015), and socio-cultural norms often de-motivate the career inspiration and self-confidence of women (Jamali, 2009). Being the primary figure to look after the elderly and children in the house, women face constraints in managing their household responsibilities along with the career demands (Wallance & Jovanovic, 2011). Besides, breaks for childbearing and for looking after children and the elderly often halt women's advancement (Green

et al, 2004; Luke, 2000; Schwanke, 2013). Women academics in Pakistan are unable to give quality time to their research-related activities due to family restrictions, consequently leading to slow progress in their careers (Batool & Sajid, 2013; Sabharwal, 2013). Likewise, various personal challenges hamper women's work productivity (Almaki et al., 2016; Giugno, 2015). For example, lack of confidence has been an issue that often restrains otherwise competent females to get hold of administration and leadership positions in academia (Broughton & Miller, 2009).

3. Methodology

This study takes an interpretive approach and empirical data was collected through qualitative research design (Creswell, 2014) from two public sector universities in Islamabad city, in Pakistan. Both universities are prestigious and are listed in the approved list of the Higher Education Commission (HEC) of Pakistan and offer co-education. The names of the universities are not being disclosed here to maintain the confidentiality of the participants.

3.1 Research Methods

Phenomenology was well suited for data collection in this research as it is a method of understanding the lived experiences of individuals as social actors. It aims to describe the phenomenon as it is lived and experienced by the participants (Dahlberg & Dahlberg, 2020). In this study, it guided us to understand the knowledge provided by women academic (Smith, 2005) and allowed us to enter deep into their lives to be able to make sense of their social world (Creswell, 2014).

3.2 Recruitment of Participants

Phenomenological interviews were conducted with 14 women academics including professors (3), associate professors (3), assistant professors (4), and lecturers (4), working on BPS in two universities in Islamabad, the capital city of Pakistan. The sample was limited to only those women who had five or more years of experience in the current rank (Patton, 2002) and the majority had entered the academy before getting married. The respondents who met the criteria were invited through emails and those who were willing to participate in this study were interviewed. The positionality of the first author played a key role in selecting the participants as she works in the federal capital and has networking. Moreover, the experience of sharing common space with the research participants enabled us to analyze their narratives and the meanings they attributed to their day to day interactions in the academic spaces.

All participants were married and the majority had 2-4 children. The lecturers and Assistant Professors had children who attended elementary schools while the children of Associates and Professors were mostly in High schools and universities. All participants had Ph.D. degrees from universities in Pakistan except four lecturers who were pursuing their PhDs in local universities. The participants belonged to Social Sciences, Arabic, and Sciences disciplines.

3.3 Data Collection and Analysis

An open-ended interview guide was used for data collection. It included questions about the participants' experiences in academies including pieces of training, research publications, teaching load, child care facilities, networks, and promotions. Social responsibilities were also examined such as familial role and work-life balance. The participants were encouraged to speak in-depth about their experiences by giving relevant examples from their daily lives. All questions were posed neutrally so that they could choose to focus on constraints or accomplishments. However, in almost all cases the participants mostly related to the barriers they were facing in regards to their career progression.

The process of data collection was a challenging task. The informants were identified and approached by the first author while the second author conducted the majority of the interviews. The academic leaders follow a strict schedule where they have to meet daily targets like teaching, attending meetings, supervision, etc. This made it difficult for them to be available at the given time and date. Hence, the interview scheduled had to be often changed to facilitate the women leaders. The interviews were conducted in English and were later transcribed. Each interview took 40-60 minutes.

The data so obtained were analyzed using thematic analysis. The thematic analysis provides a comprehensive and complex account of patterns within the data (Braun & Clarke, 2006). Taking a constructionist lens the focus of the analysis was on the latent level to look for underlying ideas, meaning, assumptions, conceptualizations, and ideologies that inform and shape the semantic content of the data (Burr, 1995). The six steps of thematic analysis as proposed by Braun and Clarke, (2006) were used to analyze the data. The analysis process started by identifying patterns and meanings from the data set. During the data immersion stage, the recorded data were transcribed verbatim by the first and second researchers. During stage 2 initial codes were developed. The data was organized into meaningful groups. Since we intended to develop data-driven themes so coding was done accordingly. Coding was done manually and memos were written where required. At stage 3 the analysis was at a broader level where codes were sorted into common categories and through these larger themes evolved. It was during this stage that the relationship between codes and themes (Braun & Wilkinson, 2003) was established. At stage 4 themes were revisited, reviewed, and refined. At stage 5 the themes were named and defined and the final stage included the final write-up of the themes. The entire analysis involved moving iteratively between the data, the coded extracts, and the analysis that is generated in the form of themes (Braun & Clarke, 2006).

3.4 Validity

Measures were taken to maintain the validity of the data and the research process. For this purpose respondent validation was employed. The transcribed and coded data were cross-checked with the women leaders and they were given the choice to add or delete data they may not want to be shared after the data was transcribed. This was a useful process since many leaders used this opportunity to add things they may have missed during the interview. Hence, the findings were constructed in

an interactive process where member checking played a key role in making sense of the data. During the interviewing stage probing strategy was used to maintain the authenticity and credibility of the data. Moreover, the process of transcribing and the use of excerpts from the participants was useful to maintain creditability (Kushner, 2005).

3.5 Ethical Concerns

For ensuring ethical measures the participants were fully briefed about the purpose of research during the first visit. Participant sheet was shared with them and their consent was taken to participate in this research and informed consent of the women was taken before the interviews (Silverman, 2001). Moreover, to ensure the confidentiality of the respondents (Patton, 2002) the names of universities and names of participants have not been identified in this paper, and instead, pseudonyms have been used.

4. Results

The findings illustrate that Pakistani women academics encountered several organizational constraints in their career progression within the academy. These included constraints in publishing and promotions, lack of facilities for child care, and lack of networking opportunities. The following sections elaborate on these barriers.

4.1 Publishing and Promotions

Studies in the west have established a positive association between publishing and higher ranks (e.g. Huang et al., 2020; Hunt, 2020; Santos & Van Phu, 2019). Men publish more scholarly papers while women publish less and hence remain in lower ranks for longer durations (Hanscock, Baum & Breuning, 2013). Women in lower ranks also spend a higher percentage of their working time on teaching and teaching-related activities than men (Santos & Van Phu, 2019). In this study it was acknowledged by the participants that publishing was a time-consuming task and the inability to publish was a major hindrance against the promotion process.

Women academics' time at work was largely consumed in teaching and performing the administrative tasks assigned by the heads of departments. While at home women prioritized their family and household chores. Almost all participants agreed that women publish less than men largely due to dual responsibilities. Additionally, the process of publication was considered to lack transparency and women encountered difficulties due to their absence of being part of networks. One of the participants said that Editors often do not respond to the emails and those who do reject the papers without even giving the chance to be reviewed. My male colleagues who completed PhDs in the last 2 to 3 years have already published several papers in local journals in Pakistan and have been promoted while I am still an Assistant professor for a year. (Shazia, Assistant Professor, University 2).

Keeping in view these difficulties, they argued that promotion/selection should not be based on publications alone and that the amount of teaching, the number of students supervised, the number of courses taught, contribution to course evaluation, course revision, and administrative tasks

should also be valued since women spend several hours doing these invisible tasks. At present these are not valued at the time of selection boards for the next cadre for faculty on BPS while for TTS these services matter. This was also supported by a woman academic working in an administrative position as Dean. She stated; “I feel that departmental contributions should also be considered for promotions besides publications.” (Alizai, Professor, University 2).

The women academics at entry-level (Lecturers/Assistant Professors) in this study seemed to be overburdened due to work-load which hampered their ability to work towards promotion. They were expected to perform multiple tasks including teaching, supervision, duties in exams, time table management, hiring of new staff, guiding the visiting faculty, student counseling, problems related to administration of department, admission, coordinating courses, and participating in different committees due to shortage of faculty in universities and supporting staff in departments. One participant explained. “You are bound to do these tasks and the fatigue you suffer minimize your ability to do any work”. Others narrated that workload prevented them to give quality time to research as Salma states; “We have to improve our qualifications and research but because of having work-load we can't give time to these activities” (Salma, Lecturer, University 1). Work-load was an issue for women in both universities in this study.

The participants in this study lamented a lack of opportunities regarding training and educational opportunities for enhancing their careers. It was argued that getting grants was difficult and most women were not favored, as the provision of such opportunities was gender-biased. This was more so in university 2. One of the respondents shared her views on this as follows. My male colleague and I had applied for a fellowship offered a few years back. We were both selected. However, the department could only send one, as per their rule. My male colleague was sent because he enjoyed better relations with the Chairman and Dean. (Shazia, Assistant Professor, University 2). The participants from university 2 were of the view that gaining access to foreign opportunities was gender-biased. This clearly illustrates a lack of organizational support for female academics, and inadequate training and higher education opportunities for them.

In university 1, organizational opportunities were experienced similarly, yet the women academics in this university seemed to be more aware of external opportunities and utilized them well. The following excerpt explains this well; I have never looked towards my university for any funding. Since I am an alumnus of a German University, I have ample opportunities for training and projects through the German exchange program and other external sources. (Hira, Assistant Professor, University 1).

This illustrates that even if the organizational practices do not favor women academics they may take personal initiatives for advancing their career.

4.2 Facilities for Women in Universities

Attention was drawn towards inadequate childcare facilities on the university campuses by all participants. There was a sense of dissatisfaction regarding day-care facilities and the provision of trained caregivers for children on university campuses. Rooms in the daycare centers were believed

to be unclean and unhygienic for young children and the rules were not very helpful. This issue was more serious for those in university 2. The following excerpt explains this well.

Honestly, I wouldn't choose it (the daycare) for my children. The carpets have not been washed for years, and the building is old and worn out it needs serious maintenance. They also need more staff out there to improve quality. (Razia, Assistant Professor, University 2)

The caregivers were believed to be untrained in University 2. Personal hygiene of the daycare was a serious issue highlighted by some participants. As one stated; I saw infants co-sleeping and crawling on the floor where the caregivers walked with their shoes. Some children were put to sleep with pillows on their heads. (Haleema, Associate Professor, University 2).

Additionally, the official timings of the daycare centers were from 8 AM to 4 PM in the universities and those mothers who took evening classes or who wanted to stay and work for late hours were not allowed to leave their children in the daycare after 4:00 PM. Alternately they had to look for other arrangements such as hiring baby sitters at home or leaving the kids with relatives. This issue greatly influenced women's productivity at work including the quality of teaching and publications. They were in a hurry to return home and look after the children.

In university 1, most of the academics kept their children at home with baby sitters since they enjoyed accommodations on university campuses. However, one participant in this study had a son who had lived in the daycare. She explained that though the university daycare is not the best option yet she took this decision to keep her child here considering her circumstances as a single mother. Besides, care for older children was an issue for women academics living in nuclear families. Hence, daycare facilities were essential for women who had no other choices whether they were single mothers or they lived in nuclear families.

4.3 Networking & Mentoring

The study revealed that formal and informal networks are important in the career development of individuals in higher education institutions. The informants believed that formal and informal networks benefit in enhancing the position of academics in several ways. On the positive side, the networks may facilitate the process of promotions and several other benefits such as participation in training and conferences where nomination from higher authorities is required. Networking allows academics to interact with each other and get access to authorities in power in the organization. This was believed to facilitate promotions and appointments on key positions within the organization. One of the participants who were also the HOD of a department in University 1 argued; "Networking increases the exposure of individuals. When you meet with people having diverse experience, you get to learn from them," (Rubab, Associate Professor). Hence, networks were believed to be beneficial in many ways.

However, for women, it is harder to be part of male networks as they find it challenging to mingle with male colleagues due to the cultural restrictions, familial responsibilities, and workload which restricted them to departmental activities. One of the women academics explained; "My life as an academic is not easy. I simply have no time to attend gatherings, meet people so how can I be part of networks?" (Jahan, Lecturer, University 2).

Besides the male networks, it was found in University 1, that there were some women networks too that operated in closed groups. These were largely formed based on personal affiliations and friendships. These groups didn't welcome all women academics to be part of them. In University 2, the women networks operated within faculties and there was one particularly active network. However, one of the participants of this study who belonged to this network explained that she had not seen any benefit from this network. She shared her experience as follows; When I was having issues with my promotion from Assistant to Associate Professor, I approached them several times. However, I was not assisted in any way. My HOD had evaluated my ACR as unsatisfactory and despite having publications and experience I was not selected in Selection Board in the first attempt. (Shiza Associate Professor, University 1).

Others from University 2 reported that there was a lack of organizational support for women and opportunities for networking were rare which restricted women within their own offices and classrooms. Mentoring is also believed to play a significant role in the career progression of women in academia (Oforiwaa, & Broni, 2013). Despite its importance, there seemed to be a lack of mentoring opportunities for women academics in the universities in this study. One of the participants explained: There is a dearth of formal networking in academia in Pakistan. Unfortunately, we have a culture where no senior has time for juniors. When young people join academia they are expected to learn on their own. (Razia, Assistant Professor, University 2)

These views were endorsed by all participants from both universities. Hence, the need to institutionalize mentoring was emphasized by the participants for better performance of young faculty.

Despite the constraints, the women's academics cherished their work and felt thankful to be able to be earning members of their families. The majority was also proud of their accomplishments such as having the ability to complete their PhDs but since they had been in their current positions for several years they seemed to be frustrated and dissatisfied with their performance. Nevertheless, they did not consider themselves as failures. They were very clear that what they were experiencing was due to circumstances beyond their control. In addition to the above constraints, several social issues hindered women's career progression. For example, they were unable to travel for conferences due to the responsibilities of child care. Career breaks for reproduction and taking care of the elderly and children interrupted their careers. Unfortunately, women did not in positions where they could negotiate this with their families. This inability to negotiate their desire for further training as well as performing academic services other than teaching, by the women is largely rooted in the socialization process. Females are trained to be less assertive and this puts them in a position where they are not able to negotiate their wishes with their families (Hussain et al, 2015).

5. Discussion

The above themes unveiled the experiences of women in the academy. A key finding highlighted by the participants was the constraints related to publishing and promotions. Previous literature has found that men publish more due to their access to different professional networks and collaborations (Burt, 2004; Nakhaie, 2002). It has also been argued that though the promotion of

faculty is based on similar criteria yet males get preference during the promotion process largely due to policies of institutions thus putting women in a disadvantaged position (Oforiwaa & Broni, 2013). Likewise, the findings on research vs teaching also related with previous scholarship where it has been argued that research is preferred for promotion against teaching (Remler & Perma, 2009; Roberts, 2002).

The workload was considered an issue that restricted women's autonomy to work on their publications. This was experienced by the younger faculty who were reported to be given more tasks at the departmental level (Schiebinger & Gilmartin, 2010). Likewise, career breaks were considered as barriers to getting access to further promotions in the academies. This also co-relates with previous researches. For example, having a child is believed to negatively impact the career of a woman (Oforiwaa & Broni, 2013; Mason & Goulden, 2002).

In light of these findings, it is suggested that women need support to progress in their academic careers. It is important to keep a balance between research and teaching and for doing this attempts may be taken to reduce their workload (Oforiwaa & Broni, 2013). Flexible working hours may be provided to women in universities to allow them space to think about personal projects and publications. Paid semester breaks from teachings may be allowed to promote research culture and to motivate women to publish. Job training could be provided to update their knowledge and skills. Though all these incentives are equally important for men, yet women deserve these more as they are giving extra share within the household.

Further, women academics worked in a predominantly male-dominated work environment where they found it difficult to become part of a professional network and to attain and maintain leadership positions. There seemed to be a lack of a mechanism for formal mentoring and informal mentoring was largely absent. This correlates with previous studies in Pakistan which report lack of mentoring facilities for women leaders in academia (Batool & Sajid, 2013). To overcome this women, need encouragement and motivation from senior academics. But since there are no incentives for an informal mentoring facility hence, universities may consider introducing formal mentoring programs for young academics to gain benefits from the expertise of seniors in such a way that the mentors are motivated to participate willingly.

Importantly, women were deeply concerned about the inadequate facilities for their children. Since the daycares available on university campuses were not well maintained and overcrowded the majority did not prefer to keep their children at the facility. As a result, they found themselves on the run between work, school, and home. They also found it difficult to deal with their dual roles and unsupportive environment at home. To deal with such challenges, women's dual roles should be considered while making policies. Measures should be made to relieve them of the concerns related to child care so that they could make better use of their abilities in the workplace. This may be done by providing child care facilities, formal mentoring facilities, and acknowledging and rewarding them for their work other than publications.

6. Conclusion and Implications

The study highlights that significant challenges are encountered by women academics in the selected Pakistani universities. These problems are rooted in organizational practices as well as the familial responsibilities of women academics. This reflects the power of patriarchy which is institutionalized through educational institutions and family.

Academia, as with other sectors, values work that delivers results and impact. These high-value outputs namely published research in high-ranking journals and winning funding for research resulting in more publications in high-ranking journals depend on having a strong network of mutual support from academics both within their university and across different institutions. However, as this study reveals women academics often have fewer opportunities for publications and research-related activities and are more involved in teaching and other mundane activities inside their departments.

The findings from this study have enhanced our understanding of the experiences of women in Pakistani universities in a detailed and nuanced way. The data contributes to the existing scholarly work on women academics and leadership worldwide by adding the perspective from Pakistan. The findings have implications for university administration and the policymaking process. The study highlights the need to understand women's perspective in making policies for academics since women constitute an important component of academia and for universities to progress there is a need to provide opportunities for women to grow and to contribute.

Some of the areas that need urgent attention at the policy level and in practice include introducing formal mentoring programs and encouraging women to participate in such programs; promoting a space where women feel comfortable in being part of male networks and benefit from them professionally; attention to daycare facilities to allow women to work with peace of mind; reducing the workload and encouraging women to apply for grants and paying attention to personal projects and publications and finally the timely promotion of those women who fulfill the criteria but remain in the same positions due to gender discrimination in organizations.

7. Limitations

This study was limited only to two public sector universities in Islamabad offering co-education and the sample size was small. Hence, the findings may not be generalized to other universities e.g. women-only universities or universities in other contexts. However, since the aim was to examine experiences of married women academics about their career progression in Pakistan, this paper contributes to our understanding of the struggles they make in surviving in academic spaces despite challenges and dilemmas.

8. References

- Almaki, S. H., Silong, A. D., Idris, K., & Wahat, N. W. A. (2016). Challenges Faced by Muslim Women Leaders in Higher Education. *Journal of Educational and Social Research*, 6(3), 75.

- Baker, J. G. (2003). Glass ceilings or sticky floors? A model of high-income law graduates. *Journal of Labor Research*, 24(4), 695-711.
- Blau, D., & Currie, J. (2006). Pre-School, daycare, and after-school care: who's minding the kids?," *Handbook of the Economics of Education*, 2, 11631278.
- Batool, S. Q., & Sajid, M. A. (2013). Barriers faced by women managers at universities: A case of Pakistan. *International Journal of Management, IT and Engineering*, 3(7), 340.
- Batool, S. Q., Sajid, M. A. & Shaheen, I. (2013). Gender and Higher Education in Pakistan. *International Journal of Gender and Women's Studies*, 1(1), 15 – 28.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Braun, V., & Wilkinson, S. (2003). Liability or asset? Women talk about the vagina. *Psychology of Women Section Review*, 5(2), 28-42.
- Broughton, A., & Miller, L. (2009). Women in senior management: Is the glass ceiling still intact. *Is, Guc: The Journal of Industrial Relations & Human Resources*, 11(4), 7-23.
- Burr, V. (1995). *An introduction to social constructionism*. Florence, KY, US: Taylor & Frances/Routledge.
- Burt, R. S. (2004). Structural holes and good ideas. *American Journal of Sociology*, 110(2), 349-399.
- Creswell, J. W. (2014). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. (7th ed.). Harlow: Pearson Education.
- Cuadrado, I., Navas, M., Molero, F., Ferrer, E., & Morales, J. F. (2012). Gender Differences in Leadership Styles as a Function of Leader and Subordinates' Sex and Type of Organization, *Journal of Applied Social Psychology*, 42(12), 3083-3113.
- Dahlberg, H., & Dahlberg, K. (2020). Phenomenology of Science and the Art of Radical Questioning. *Qualitative Inquiry*, 26(7), 889-896.
- De Paola, M., & Scoppa, V. (2015). Gender discrimination and evaluators' gender: evidence from Italian academia. *Economica*, 82(325), 162-188.
- Ely, R. J., Stone, P., & Ammerman, C. (2014). Rethink what you "know" about high-achieving women. *Harvard Business Review*, 92(12), 100-109.
- Fazal, S., Naz, S., Khan, M. I., & Pedder, D. (2019). Barriers and enablers of women's academic careers in Pakistan. *Asian Journal of Women's Studies*, 25(2), 217-238.
- Giugno, L. (2015). *An Exploration of Female University Professors' Experiences of Negotiating Between Personal and Professional Roles, Stress, and Mental Health*. [Unpublished Masters Dissertation, The University of Western Ontario]. *Electronic Thesis and Dissertation Repository*. 2750. <https://ir.lib.uwo.ca/etd/2750>
- Green, E., Moore, J., Easton, H., & Heggie, J. (2004). Barriers to women's employment and progression in the labour market in the North East of England. *Centre for Social and Policy Research, University of Teesside*, 16-42.
- Gregory, R. F. (2003). *Women and workplace discrimination: Overcoming barriers to gender equality*. London: Rutgers University Press.

- Hamel, S. A. (2009). Exit, voice, and sense making following psychological contract violations: Women's responses to career advancement barriers. *The Journal of Business Communication*, 46(2), 234-261.
- Higher Education Commission (HEC). HEC Recognized Campuses. Retrieved August 16 from: <https://www.hec.gov.pk/english/universities/Pages/DAIs/HEC-recognized-Campuses.aspx>
- Hoodbhoy, P. (2009). Pakistan's Higher Education System - What Went Wrong and How to Fix It. *The Pakistan Development Review*, 48(4), 581-59.
- Hussain, I. (2009). *Problems of working women in Karachi, Pakistan*. Cambridge Scholars Publishing.
- Hussain, M., Naz, A., Khan, W., Daraz, U., & Khan, Q. (2015). Gender stereotyping in family: An institutionalized and normative mechanism in Pakhtun Society of Pakistan. *SAGE Open*, 5(3), 2158244015595258.
- Jamali, D. (2009). Constraints and opportunities facing women entrepreneurs in developing countries: A relational perspective. *Gender in Management: An International Journal*, 24(4), 232-251.
- Johnson, K. A. (2018). Women Academic Leaders in Higher Education in Pakistan: Perspectives of Female Students Enrolled in Higher Education Degrees. *Pakistan Journal of Women's Studies: Alam-e-Niswan*, 25(2), 59 – 77.
- Keating, D. (2015). *Women in the workplace: The Barriers to Gender Equality*. Alpine Media Group. Retrieved from www.enei.org.uk
- Khan, A. A. (2019, June 14). Massive Funding Cut Imposed on Higher Educaion. *University World News*. Retrieved August 17 from: <https://www.universityworldnews.com/post.php?story=20190614111207602>
- Khan, T. A. & Jabeen, N. (2019). Higher Education Reforms and Tenure Track in Pakistan: Perspectives of Leadership of Regulatory Agencies, *Bulletin of Education and Research*, 41(2), 181-205.
- Kushner, K. E. (2005). Embodied context: Social institutional influences on employed mothers' health decision making. *Health Care for Women International*, 26(1), 69-86.
- Lee, Y. J., & Won, D. (2014). Trailblazing women in academia: Representation of women in senior faculty and the gender gap in junior faculty's salaries in higher educational institutions. *The Social Science Journal*, 51(3), 331-340.
- Luke, C. (2000). One step up, two down: Women in higher education management in Southeast Asia. In *Academic work and life: What it is to be an academic, and how this is changing* (pp. 285-305). Emerald Group Publishing Limited.
- Martin, E. (2001). *The woman in the body: A cultural analysis of reproduction*. Beacon Press.
- Mason, M. A., & Goulden, M. (2002). Do babies matter? *Academe*, 88(6), 21.
- Nakhaie, M. R. (2002). Gender differences in publication among university professors in Canada. *Canadian Review of Sociology*, 39(2), 151 – 179.

- Nakhaie, M. R. (2002). Gender differences in publication among university professors in Canada. *Canadian Review of Sociology/Revue Canadienne de Sociologie*, 39(2), 151-179.
- Oforiwaa, O. A., & Broni, A. P. (2013). Gender and promotions in higher education: A case study of the University of Education, Winneba, Ghana. *International Journal of Education Learning and Development*, 1(2), 95-109.
- Onsongo, J. (2004). Factors affecting women's participation in university management in Kenya. *Gender Issues Research Report Series –No. 22. Organization for Social Science Research in Eastern and Southern Africa.*
- Othman, Z., & Othman, N. (2015). A literature review on work discrimination among women employees. *Asian Social Science*, 11(4), 26.
- Pakistan (2018-19). *Economic Survey*. Islamabad. Economic Advisors Wing, Ministry of Finance.
- Patterson, C. A. (2006). *The glass ceiling effect: A perspective of African American women.* [Doctoral Dissertation, Campella University]. Minneapolis, Minnesota. ProQuest Dissertation, Global.
- Patton, M. Q. (2002). Two decades of developments in qualitative inquiry: A personal, experiential perspective. *Qualitative Social Work*, 1(3), 261-283.
- Remler, D. K., & Pema, E. (2009). Why do institutions of higher education reward research while selling education? (No. w14974). National Bureau of Economic Research.
- Roberts, T. S. (2002). Academics in academia: The forgotten resource in the rush to new technologies. *Educational Technology & Society*, 5(2), 164-71.
- Ruhm, C., 1998, "The Economic Consequences of Parental Leave Mandates: Lessons from Europe," *Quarterly Journal of Economics*, 113(1), 285-317.
- Sabharwal, M. (2013). Productivity and leadership patterns of female faculty members in public administration. *Journal of Public Affairs Education*, 73-96.
- Santos, G., & Dang Van Phu, S. (2019). Gender and Academic Rank in the UK. *Sustainability*, 11(11), 3171.
- Schiebinger, L., & Gilmartin, S. K. (2010). Housework is an academic issue. *Academe*, 96(1), 39-44
- Schwanke, D. A. (2013). Barriers for women to positions of power: How societal and corporate structures, perceptions of leadership and discrimination restrict women's advancement to authority. *Earth Common Journal*, 3(2), 15-28.
- Silverman, D. (2006). *Interpreting qualitative data: Methods for analyzing talk, text and interaction.* London: Sage.
- Smith, D. (2005). *Institutional Ethnography: A Sociology for People.* Walnut Creek, CA: Alta Mira Press.
- Taj, S. (2016). Challenges to female educational leaders in Kyber Pakhtunkhwa, Pakistan. [Unpublished Doctoral Dissertation, University of Iowa]. Illinois, USA.
- United Nations International Children Education Fund (UNICEF). (2006). *The state of the world's children.* South Asian ed. New York: UNICEF Women and Children.

- Wallace, J., & Jovanovic, A. (2011). Occupational similarity and spousal support: A study of the importance of gender and Spouse's Occupation. *Relations Industrielles/Industrial Relations*, 66(2), 235-255.
- Wippermann, C. (March, 2010). *Women in Executive Positions Barriers and Bridges*. Federal Ministry for Family Affairs, Senior Citizens, Women and Youth. Heidelberg.
- World Economic Forum (2017). *The Global Risk Report*. World Economic Forum Geneva.
- Yousaf, R., Schmiede, R. (2017). Barriers to women's representation in academic excellence and positions of power. *Asian j. Ger. Eur. stud.* 2, 2. <https://doi.org/10.1186/s40856-017-0013-6>.

Identification of Effective Strategies for the Enhancement of ECE Enrollment Ratio: A Study of the Schools of District Kamber Shahdadkot and Khairpur Mirs

Abul Ala Mukhtar Soomro¹, Shahid Hussain Wassan², & Dr Ghulam Muhiuddin Solangi³

¹ Head Master Govt. Boys Primary School Junani, Warah, Kamber Shahdadkot

²HST Govt. Boys High school Haji Nawab Khan Wassan, Kotdiji

³Department of Education, Shaheed Benazir Bhutto University, Shaheed Benazirabad

Corresponding author's email: abulalamukhtar@gmail.com

Abstract

Early Childhood Education (ECE) is a form of education which has been introduced in Pakistan from 3-8years old children till the beginning of formal education. The study is aimed at to explore the effective strategies in order to intensify the enrollment of ECE. The descriptive survey study was conducted at both public and private sector schools. It is to enhance the enrollment of ECE children. Head masters, ECE teachers, and students of the locality formed population of the study. Random sampling technique was made to generalize the results of sample. After the collection of data from two Questionnaires first from 20 Head teachers and second from 40 ECE teachers' data were analyzed in quantitative methods through the SPSS 23 version. As the conclusion is to enhance enrollment of students, has been projected to address the real elements of enrollment in order to increase it at the rapid pace. The main concern of this research study deal the issues of lesser enrollment at ECE level shortage of well trained teachers, lack of material, malnutrition, poverty, and health pandemic COVID-19, to specify the strategies for enhancement of enrollment ratio of ECE students such as integral formation, didactic activities, professional performance of head teachers and teachers, immediate response to pandemic and manipulation of mass, digital media, reconstruction of connectivity between stakeholders, separation of ECE teachers with integration of innovative activities such as STEM and STEAM, ICT for holistic development of children.

Keywords: *Early Childhood Education, issues and challenges Identification of strategies, Enhancement of enrollment*

1. Introduction

ECE plays primal and reformative role in the very early period of the child's life. Through this education, child becomes proficient in language, prologs its attentive span, develops its communicative skills, and enables himself solve the problem by means of the interactive environ (Asghar, Munawar & Sittar, 2021). In the ECE children try to entail an acquisition of the ideas, attitudes, and constructs in order to lay foundation for the preparation or readiness of the school. In the presence of the daunting challenges such as such as lack of resources, untrained teachers, non-availability of the physical facilities. To counter act as such pressing problems the introduction of the proper system for the efficient and effective evaluation and monitoring will lead to prevail the conducive environ to get SLO's in the light of the ECE program (Nawaz, Ashraf & Siddique, 2021). Early childhood science education deals with the mental approach of the children from the

multi-dimensional perspectives for the sake of the students' learning. In this regard, the mental representation of the children is very vital for the process of the teaching and learning and for the involvement of the parents in the upbringing of their children at school (Ravanis, 2022). Dialogic reading ignites and encourages the parents to get their children involved into interactions such verbal and non-verbal. This can be done by shared readings between parents and their children (Chang et al., 2022). These are teaching qualities that offer the raising environment for the morality, intellect, spirit. These are just like pre conditions that the didactic processes in the pre schooling have positive influence upon the psyche of the younger children (Hamidovna, 2020). ECE school education can be developed by the development of the teacher leadership (Wang, & Ho, 2020). According to many research studies ECE provides the platform to foster educational care at this budding stage and prepares the child for the success in futurity. The languages such as mother tongue and second international language are blended together wherefrom child tries to interact through this mid-way process of internalization and culturalization before his entry into elementary school (Ghazi et al., 2018; Lee, Zhai, Brooks-Gunn, Han, & Waldfogel, 2014). According to Wawire (2006) and Ghazi et al. (2018) that well organized and planned ECE produces spectrum of experiences productive to the wellbeing and cognitive and educational development. The cultivation of the healthy, intentional and mindful educators supports the emotional stability and its regulation to lead towards the well-being of the teachers. It augments the knowledge acquisition and application of the practices to cope the stressful workplaces (Hatton-Bowers et al., 2022). All this is possible when the child gets well equipped with ECE classrooms, mechanical, technological devices, well trained faculty and conducive environment. There in ECE schools the distributed pedagogical leadership with its implementation as in the forms of it, are highly related with the ECE' teachers capability to make the learning process within the class and school as productive as possible (Heikka et al., 2021). The activity based curricula of ECE and education is highly essential for the too young children. This can be inducted by the teachers training institutes within the schools (Mubashar, Hashmi & Altaf, 2020). According to article 25-A of the constitution of Pakistan that every child has inborn right to have access to education between the age of 5 and 16. However, early childhood education in the public as well as private sector institutions has neglected the importance of ECE in children holistic development. Unfortunately as such access is denied due to unavailability of the resources and sorry condition of awareness among people. National education Policy (1998-2010) the provision was made for the re -entry of Katchi class as formal part of education (Aly, 2007). The ECE and its related activities within class and school: ECE attracts the children towards its fundamental cluster of activities that is mainly designed for enfolding the kids into natural setting where they feel familiarity and acquaintance just like their home. Here they are also provided with gadgets to utilize them as much as their capacity leaving no cumbersome effect but rather the place to learn with enjoyment. It is only possible when educational expert and teacher as the mentor and guider help them achieve the task as assigned to these curious kids. Children get their own experience and learn to take initiatives in order to make close proximity with environment. At this stage (2-5 years) is for to make concepts; get ability to

solve problems; grab attention and to develop communication skills. Psycho motor skills also grow stronger in terms of play way methodology of education.

1.2 Problem Statement and the Significance of the Study

Early Childhood Education (ECE) has been given much importance in the development of children in initial years of Schooling. Pakistan is signatory of many international bodies including Sustainable development goals (SDGs), Millennium development goals (MDGs) and Education for all (EFA) to uplift the standard of education in Pakistan at pre-primary and primary level. ECE institutions can do strategic planning to develop the sustainability as their central value to it. This sort of the planning can be aimed at the ecological subject matter such as to sort out and then reduce the non-cyclic garbage; to ensure the care under taken for the friendly environment (Meland, 2022). On the other hand families have to employ the coping mechanism or strategies at every levels such as environmental, individualistic, and relational in order to take decisions and develop certain attitude towards them (Salin et al., 2020). However, the previous education policies were based on teaching of children from Katchi classes which were completely based on teacher-centered approach in which children's holistic development was ignored. The Government of Pakistan has realized this with the international developments and formally introduced ECE in National Education Policy of Pakistan in 2009. With the initiative of ECE in schools, both government and private sector schools did not get required number of children for ECE classes. The children who get admission in ECE dropout from schools due to one or other reason. The literature has identified many reasons of dropout of children at ECE level including less attention given by government for the promotion of ECE, lack of awareness among masses, missing facilities in schools, shortage of qualified teachers specially female teachers at ECE level, Non availability of instructional materials, health and nutrition issues among ECE age level students, Poverty and poor infrastructure in schools has caused the lesser enrollment of students at ECE level. In the under developed and developing countries Pakistan as inclusive in it, the research oriented ECE schooling is very limited. Whereas, it has been predominant in the other countries (Von Suchodoletz, 2022). Therefore, a study is required in the setting of rural Sindh to investigate the causes of lesser enrollment of children in ECE classes. This study will play major role in identification of effective strategies for the enhancement of ECE enrolment at two districts of Sindh Province.

There is a great significance of Early Childhood Education in educational system at the globe level. It has been recognized throughout the process of the schooling of kids and proved to be as the catalyst for the further cognitive development and educational achievement of Children (Ghazi, Ajmal, & Saeed, 2018; Magnuson, Ruhm, & Waldfogel, 2007). ECE casts deep and lasting impressions upon the mind of the young progeny to perform better in the context or setting (Barnett et al., 2008). ECE plays rudimentary and fundamental role laying down the strong foundation of the whole structure to be erected upon. The underground foundation is deep rooted into the familial, social, cultural institutions that counter act and interact with children because almost 85% of the brain development occurs at the age between birth and 8 years 1 (Ortiz-Laso & Diego-Mantecón, 2020). These formative years orient the children to internalize the multi-dimensional factors of

personality. Children try to relate to relevant phenomenon of the budding life with their co-existents such as family, community and other social strata (Yang & Li, 2022). The ECE yields the educational productivity in development in researched schools. It decreases the drop out ratio of students and ensures their retention in the school. Hence it maximizes the quality of education and promotes the moral and civic sense among the students. It also improves their enrollment to ensure their presence. At this early age of students in ECE classes make them well acquainted with physical environment where they are taught properly their hygiene and health issues. Moreover, they realize the ethnocentric concepts to be incorporated with tinge of socialization in their personalities. ECE teachers tries to mold their character in order to prepare them for good citizenship.

1.3. Research Objectives, Questions and Hypotheses

The objectives are (a). to analyze the potential challenges for the lessor enrollment ratio of students in district Kamber Shahdaskot and Khairpur Mirs; (b). to specify the effective strategies for the enhancement of student's enrollment in district Kamber Shahdaskot and Khairpur Mirs. The research questions are (a). What are the potential challenges for the lessor enrollment ratio of students in district Kamber Shahdaskot and Khairpur Mirs? (b). What are the effective strategies for the enhancement of student's enrollment in the district Kamber Shahdaskot and Khairpur Mirs'? The research hypotheses are (a). Ho. There is no significant relationship between ECE effective strategies and enrollment ratio of students; (b). H_A. There is significant relationship between ECE effective strategies and enrollment ratio of students.

2. Literature Review

Early Childhood Education (ECE) is a form of education which has been introduced in Pakistan from 3-8years old children till the beginning of formal education. If the strategy to make the ECE children to play outdoors is viable to implementable, then the aversive perceptions of parents and those who are practitioners will be reduced to negligible level (Sandseter, 2020). Children's cognitive development starts from the activities carried out in home and ends in surrounding society. The complete internalization of thought process, socialization and learning process of the children takes place within the home and society. The long term strategy or the intervention such as STEM in ECE where, the teachers and learners learn with the provision of the space to orient their activities through the play way exploration (MacDonald et al., 2020). The First National Curriculum of ECE was prepared in 2002 but could not implemented because of lack of resources and finances. Then, it was modified in 2006 and finally introduced in National Education Policy (NEP) 2009 it was denoted in five policy actions on ECE (Ghazi et al., 2018). According to Pakistan Education statistics (2015-2016) Total enrollment of Pre Primary Education was 8.74 million and the gross enrollment ratio 74%. Pre-Primary Education ranking in between 3 to 4 years the net enrollment rate in Pakistan is supposed to be around 36%. It highlights that 1/3 of children are enrolled in ECE 2/3 of children are out of the schools (Rural 61% and Urban 39%). Why? To develop ECE policy and minimum standard of enrollment, establish ECE resource center in a

phased manner focusing initially on the most vulnerable population across Sindh Province to transform 8000 Katchi on the theme of ECE. To support learners transition from home to school (SESP) 2014-2018. The experts of early childhood education highlight that children strongly develop cognitive, social, emotional, linguistic skills that predict their latter function in their domain (Trawick-Smith & Smith, 2014; Woolfolk & Perry, 2012). In terms of psycho analysis social development at early stage affect adulthood (Hindman & Morrison, 2012). Early Childhood Education casts selective behavior the children emitted with as such choices being affected by individual personalities, circumstances, primitive experiences and strong models (Thompson & Dahling, 2012). Games and playing with toys learning produces lasting impression (Gunindi, 2013; San-Bayhan & Artan, 2009). Through the introduction of the story telling condition, the children try to enhance the digital and literacy skills (Maureen, van der Meij & de Jong, 2020). Field trips also plays the important role to meet children's need through on spot observation, skills and attitudes (Bozdoğan, 2012; Krahenbuhl, 2014; Smith-Walters, Hargrove, & Ervin, 2014). Such trips allure the children towards the school and inspire other children to attend the school and this early childhood education effects on early intervention to prevent disease to promote health throughout life (Campbell et al., 2014; Conti, Heckman, & Pinto, 2016). In ECE the Norwegian have drawn their attention towards descriptive characteristics of qualities such as organization of groups, demographic and physical environment, ownership and other levels of education (Gulbrandsen & Eliassen, 2013). If income related gaps of parents are resolved that can have positive impact upon preschool enrollment trends (Reardon, 2011), low income families have negative effect to send their kids to school (Weiland & Yoshikawa, 2013). Spread of universal ECE has raised the chances to the options to help financially the affluent parents as a package of public provision to send their kids towards the school (Bassok, Fitzpatrick, Loeb, & Paglayan, 2013). Literature supports to the notion about policies that poor children are afforded than the attendance of preprimary school may contribute to higher primary completion ratio (Grantham-McGregor et al., 2007; Heckman, 2006; Olson, 2012). Related literature which incorporates the idea of Early Child Hood education, significance of ECE, productivity of ECE, policies framed at national level, regional information of ECE in the two proposed schools of two districts of Sindh Province. Prior to the admission of young children into the formal education, ECE works at the very crucial age of the children in order to develop their cognitive, intellectual and emotional upbringing not only in the terms of how much they are old. ECE makes them early masters not to get them informed of physical brain knots but they conceptualized knots of their mind (Syed, Asif, & Yousaf, 2011). Sustainable development goals (SDG 4.2) of united nations during September 2015 relates "By 2030, ensure that all girls and boys have excess to quality Early Child Hood development, care and pre-primary education so that they are ready for primary education" Production of healthy mid set that within very short time span children pickup himself/herself to be the social moral, intellectual and educational catalyst due to result of interaction in the society (Ghazi et al., 2018).

2.1. Policies Framed on National Level

The detailed information of the policies of ECE in Pakistan can be understand as follows in table.1.

Table. 1: Short history of policies propounded for ECE in schools in Pakistan

Time Line	Historical Progressive Cycle.
1947	Nursery as indigenous and integral part of main stream education at education conference 1947.
1950-1980	Mere familiarity of Katchi class
1992	Main streaming of Katchi class
1998	Recognition of importance and dire need of ECE.
2002	Curriculum developed so far
2001-2004	ECE as an innovative program federally funded
2009	Recommending ECE as part of main stream education
2001-2015	National plan of action for EFA (2001 – 2015) recommended the complete main streaming of ECE in the formal educational system.
2017	Free and compulsory quality Pre-Primary or ECE for children of age four to five years and equal access to Early Childhood education and holistic development for the children of age group three to four years by 2030.

(Ghazi et al., 2018)

ECE places and showers productive and long lasting impression upon the children to develop their critical thinking and reasoning or cognitive development takes place at this educational juncture (Brooks-Gunn, 2011). Moreover, social, emotional, cultural and linguistic development become productive assets to the children, family, society as a whole. In this regard, the children's vocabulary development from pre-school to KG has been made easier with the facilitation of the teacher offered to students to communicate (Justice, Jiang & Strasser, 2018). The online learning can promote the children' learning and develop them intellectually by means of the online communication (Kim, 2020). Introduction of ECE in high priority schools: Separate ECT has been recruited and inducted in high priority schools where class room setup, audio video aids, accommodation of ECE furniture well decorated class with soft boards, models, charts and play toys will be provided.

3. Methodology

The mechanism and method adopted was very descriptive and survey type research. For the collection of data from local levels of twenty schools located at different districts of Sindh Province the study was conducted by both assigned research members. Each of the head teachers and ECE teachers were surveyed. The districts wise survey was administered to all Head teachers and ECE teachers in order to collect school level information that could inform effective strategies for the enhancement of ECE children ratio. They represented their schools and served as a random sample

of the population of both districts of Sindh province. The measures were taken to develop a survey instrument or tool to measure the structural features or strategies for the enhancement of enrollment ratio of ECE students within their respective twenty schools.

3.1. Population, Sample and Instrumentations of the Study

The advanced measures that can be numerically gathered, coded and administered on large scale of the population are mostly analyzed statistically through quantitative research. One of which is descriptive statistics that can identify the researched purpose of ECE enrollment. Because globally ECE enrollment rates have grown since 1960s in the considerable manner. As a consequence, there is dire need to measure and identify effective strategies that are deemed as quality indicators in ECE education. In this regard, Twenty Head masters, forty ECE teachers, of the locality formed the sample of the population of the study. The survey questionnaire has been used in this research that is intended for the Head teachers and Teachers to inform ECE practices for the enhancement of enrollment ratio through the effective strategies applied there. Two questionnaires were developed for the Head Masters of schools and Early Childhood Education teachers, of the areas for the collection of data. The pilot testing of research an instrument was carried out in the four schools; firstly, GBPS Junani secondly Muhammad jam Soomro public school, thirdly GBPS Rahim Bux Wassan and lastly Al Mehran Model school Chodaho of Kamber and Khairpur Mirs Districts respectively. Twenty (20) sample schools of two districts Kamber Shahdadkot and Khairpur Mirs were visited by research members to collect data and that data were analyzed in quantitative methods through the SPSS 23 version. Finally recommendations were made for the implementation of ECE policy of Education Department Government of Sindh in true spirit.

4. Results and Discussion

Data revealed in table.1 that ECE teachers and their training was 100% and additional budget and ECE rooms were lesser than the above three elements of provision of ECE.

Table. 2: Provision of ECE

Items	Option	Frequency	Percent
ECE Attached	YES	20	100.00
Provision of ECE Teacher	YES	20	100.00
Additional Budget	YES	15	75.00
ECE Teacher Training	NO	05	25.00
ECE Rooms	YES	20	100.00
Playing Facility	YES	15	75.00
Toys, etc.	NO	05	25

In table No.3 Motivation of parents for sending their children to school for ECE here the different methods of increasing ECE enrollment were analyzed by the data. Parent teacher meeting and school council members were 100% indicators for the incensement of ECE student's data. In door to door campaign and advertisement in newspaper were little bit short of percentage ratio and likelihood is 75%.

Table 3. Method of Increasing ECE Students

Items	Option	Frequency	Percent
Door to Door Campaign	YES	15	75.00
Advertisement in Newspaper	YES	15	75.00
Parent Teacher Meeting	YES	20	100.00
School Council Member	YES	20	100.00

In table.4. admission of ECE children in primary class one where less than 50% students were 100% admitted and round about 50% chances of admission into primary class one was least in percentage.

Table 4. ECE Children Admission

Items	Option	Frequency	Percent
100 Percent	NO	15	75.00
80 Percent	NO	15	75.00
50 Percent	YES	10	50.00
Less than 50 Percent	YES	20	100.00

In table No.5 arrangement of activities for ECE children in the school revealed that playing with toys and drawing were 75% is the indicators of arrangement where 25% of both these indicators of this statement were non-happenings.

Table 5. Activities Arranged for ECE Children

Statement	Frequency	Percent
Playing with toys	15	75.00
Drawing	15	75.00

Holistic development of ECE children data as in the below table No.6 revealed that the development of children stimulating environment, interactive environment, activity based learning, psychology of child and meaningful learning were 100% in ratio was the possible outcomes of holistic development whereas modern achievement standards is the least percentage ratio of that phenomenon.

Table 6. Holistic Development of Children

Statement	Frequency	Percent
Stimulating Environment Yes	20	100.00
Interactive Environment Yes	20	100.00
Activity Based Learning Yes	20	100.00
Psychology of Child Yes	20	100.00
Best ECE Curriculum Yes	15	75.00
Modern Achievement Standards Yes	10	50.00
Meaningful Learning Yes	20	100.00

ECE curriculum type as in table No.7 identified that activity based children centered and ECE curriculum with cultural diversity were 100% likely to become as for as content based type of curriculum is concerned it was categorized 50%.

Table 7. Type of ECE Curriculum

Statement	Frequency	Percent
Activity Based Children Centered Yes	20	100.00
Content Based Yes	10	50.00
ECE Curriculum Takes Account of the Cultural Diversity of Your Area Yes	20	100.00

Percentage of male teachers in researched schools is 58% and female teachers is 42%.

Table 8. Gender wise Teachers

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	35	58.0	58.0	58.00
female	25	42.0	42.0	100.00
Total	60	100.0	100.0	

ECE training duration design to teach ECE classes two weeks was categorically high in percentage and data revealed in table No.9 that 42% had come in this category and on the other hand one-year duration was the least percentage which was counted as 8%.

Table 9. ECE Training Duration

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Two Weeks	25	42.0	42.0	42.0
	One Month	15	25.0	25.0	67.0
	Six Month	15	25.0	25.0	92.0
	One year	5	8.0	8.0	100.0
	Total	60	100.0	100.0	

Where the ECE teachers had obtained the training most of the training was from Regional Institute of Teacher Education (RITE) and it led with 84% and other institutions are least counted training institutions.

Table 10. Name of Institution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	PITE	5	8.0	8.0	8.0
	RITE	50	84.0	84.0	92.0
	Cluster Center	5	8.0	8.0	100.0
	Total	60	100.0	100.0	

Focused areas of training data revealed in table No.11 that holistic development of a child led with 50% and teaching pedagogy was lagging behind with 8%.

Table11. Focus Areas

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ECE Curriculum/Content based	15	25.0	25.0	25.0
	teaching Pedagogy	5	8.0	8.0	33.0
	Psychology of ECE Children	10	17	17	50.0
	Holistic development of child	30	50.0	50.0	100.0
	Total	60	100.0	100.0	

Classes to be taught daily in the school data in table No.12 revealed that ECE and one to three class were taught with 33% and a least percentage 17% is of ECE and class one to five.

Table 12. No of Classes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Only ECE class	15	25.0	25.0	25.0
	ECE and 1-2 Class	15	25.0	25.0	50.0
	ECE and 1-3 class	20	33.0	33.0	83.0
	ECE and 1-5 class	10	17.0	17.0	100.0
	Total	60	100.0	100.0	

Table No.13 showed that students numbered from 21-30 are most frequent figure of the Size of ECE class and had 67%.

Table 13. Size of ECE Class

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-30 students	40	67.0	67.0	67.0
	more than 30 students	20	33.0	33.0	100.0
	Total	60	100.0	100.0	

Data of table No.14 showed that how many students almost drop from ECE class during the academic session in the research was showing that 10% of students were numbered 58% in table.

Table 14. Students Dropout Percentage

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10 %	35	58.0	58.0	58.0
	20%	25	42.0	42.0	100.0
	Total	60	100.0	100.0	

Table No.15 manifests that holistic development of children was the greatest in 67% and strong educational foundation was having 33%.

Table 15. Reasons of Sending Children to School

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Holistic Development	40	67.0	67	67.0
	strong education foundation	20	33.0	33.0	100.0
	Total	60	100.0	100.0	

Period of interaction with parent’s data of table No.16 posited that quarterly and monthly period of interaction with parents had the same chance to occur and both were assigned 50-50%.

Table 16. Period of Interaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	monthly	30	50.0	50.0	50.0
	quarterly	30	50.0	50.0	100.0
	Total	60	100.0	100.0	

Facilities availed by ECE students in the class drinking water had the highest 50% figure and ECE furniture has 8%.

Table 17: Facilities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Toys	15	25.0	25.0	25.0
	Drinking water	30	50.0	50.0	75.0
	activity books	10	17.0	17.0	92.0
	ECE furniture	5	8.0	8.0	100.0
	Total	60	100.0	100.0	

Table 18. Evaluation

		Frequency	Percent	Valid Percent	Cumulative Percent
This Valid	Watching their activities	45	75.0	75.0	75.0
	verbal test	10	17.0	17.0	92.0
	written test	5	8.0	8.0	100.0
	Total	60	100.0	100.0	

Table No.18 revealed that watching their activities had the highest 75% which was the factor that shows the important evaluation based on observation. As this very initial stage written test was much more difficult to become evaluating factor and is 8% in number.

4.2. Findings

4.2.1. Potential issues and challenges encountered to enhance the enrollment.

1. In addition to ECE children challenges, the educators themselves are suffering from the numerous issues, stresses meanwhile imparting the education. Thus educator's well-being is supposed to be catalyst to child qualitative relationship with regard to its learning and development (Eadie et al., 2021).
2. The health pandemic and other crises such as environmental reshuffling, political turmoil, socio- economic degradation, jeopardize children' development in terms of the quality education (Spiteri, 2021).
3. As the reaction to this pandemic COVID-19, it apparently leads to risks and problems such as obesity, cardio vascular and diabetes among the educators, teachers and children. The restrictions proscribed by the pandemic COVID-19 disturbed and disrupted the behavior ranging from the physical activities to the sedentary and sleep modes. These social restrictions decreased the quality of the schedule to the children (Bates et al., 2020).
4. To cope as such fatal challenges, the programmatic and policy strategies should be expedited to promote the physical activity and reduce the sedentary behavior (Dunton, Do & Wang, 2020).
5. Besides the shortage of well trained teachers had made this enhancement of ECE ineffective. In addition to instructional regarding ECE has not been provided.
6. Malnutrition and bad health have also effected badly to put check upon the children to go to the school regularly and punctually.
7. Consequently, the poverty of their parents has been witnessed as big blow to the enhancement of Early Childhood Education.

4.2.2. Effective strategies for the enhancement of students' enrollment.

- 1 There is cluster of strategies to identify and enhance enrollment ratio. Government sector should pay attention towards neglected section of population to ensure and convince people to send their kids to schools.
- 2 For the integral formation of the regular and punctual students, the didactic activities such as orientation, innovation in ideas, constructs, and professional performance of the teachers are predetermined conditions for the active participation and presence of the children within the multi fold activities that resultantly will lead to accelerate the enrollment of the younger students (Herrera et al., 2022).

- 3 Strategy to avert unfair and unnecessary dominance of the school and its static professional attitude of the teachers, should be enforced as policy development (Cohen et al., 2021).
- 4 Especially in the wake of the COVID-19, the immediate response to promote the child care in the ECE classes and school, the policy would be implemented as staunch strategy (Blum & Dobrotić, 2021).
- 5 By means of mass media awareness drive regarding the enhancement of effective enrollment schools will be enabled to tend the bulk of children who are permanently away from the schools. The teachers pedagogical and communicative skills involves him to establish the groups in children that will further work like inviting agents to get outside students allured to attend the schools properly (Undheim & Jernes, 2020).
- 6 There needs reconstruction of the connectivity among parent- teacher- child triangle will be just like golden triangle that takes on the board these three stakeholders to create the conducive environment for the quality education as social stimulus and capacity for the enhancement of the enrollment (Lutfatulatifah, 2022).
- 7 The separate allocation of ECE teachers in high priority primary schools is to be done as written in education policy 2017.
- 8 Through the integration of concepts of the STEAM as an intervention or scientific activity, the activity plan or strategy should be to get ECE children solve the problems embedded within the situation offered to them. This will accelerate the higher order literacy (Zhou, 2022).
- 9 The provision of basic material required for the ECE class should be done.
- 10 The holistic development of the children led by head teachers and teachers to foster the healthy teaching and learning by applying the pragmatic and practical activities such as conventional and digital story telling. This enhanced the entertainment, capture of the theatrical and communicative insights. In this regard manipulation of the simulation and ICT method implemented within the schools would be catchy for the enhancement of the enrollment for it serves and entice the children to be actively present within the schools (Rahiem, 2021).
- 11 The schools have to arrange ECE attractive programs that persuade the reluctant children to be the part of learning process formally.
- 12 The early childhood development programs are deemed as the workable strategies to improve the service with regard to the education and to increase the access or approach to seek (Blimpo et al., 2022).

5. Conclusion, Implications, Recommendations

5.1. Conclusion

The subject matter of this quantitative research manifests almost similar situations of these schools located at the different physical plane Kamber Shahdadt and Khairpur Mirs' districts respectively. In this regard, it is very crucial for the practitioners to provide the synchronous versus, asynchronous teaching and learning environment to the ECE teachers and students respectively. This will lead towards the better academic impact upon the parents and children as well (Timmons et al., 2021). To enhance enrollment of students has been subject matter of this research that is

projected to address the real elements of enrollment in order to increase it at the rapid pace. Hence, it is drawn that H_A there is significant relationship between ECE effective strategies and enrollment ratio of students. The main objectives which deal with the matter in focus are to identify the issues of lesser enrollment at ECE level and to specify the strategies for enhancement of enrollment ratio of ECE students. The above schools have been running the ECE classes since then taking into confidence the stakeholders instead of the Government. The main concern of this research study deal the issues of lesser enrollment at ECE level shortage of well trained teachers, lack of material, malnutrition, poverty, and health pandemic COVID-19, to specify the strategies for enhancement of enrollment ratio of ECE students such as integral formation, didactic activities, professional performance of head teachers and teachers, immediate response to pandemic and manipulation of mass, digital media, reconstruction of connectivity between stakeholders, separation of ECE teachers with integration of innovative activities such as STEM and STEAM, ICT for holistic development of children.

5.2. Implications

1. The valuable implication on part of the professional head teachers and teachers to integrate the cultural and social diversity into curriculum to owe the problems as opportunity by the process of the lateral thinking will lead hybrid enrollment of the children.
2. It is expected that this study will be helpful for authorities, head teachers and teachers to seek better understanding of ECE enrollment factors which will serve as guiding stars to get awareness and solution to the relevant problems.
3. This research implies local community, family and teachers as the indicators of the mobilization ECE enrollment will be enhanced more functional.
4. The main motive of this research is to access and analyze issues or factors responsible for the static development of ECE at the primary level and then to chalk out strategies to pave the way for those children to be educated at this vital phase of their lives.
5. Government of Sindh is determined to render service to the communities for the promotion of ECE in Urban as well as Rural areas in the futurity.

5.3. Recommendations

1. Low concentration drawn by the government has been remained the main grave concern. It does not pay attention to investigate and inquire with the rationality.
2. Policy makers or the heads of organization then it is the duty to be discharged by them to enforce the policies at this primary level of education on the priority basis.
3. On the other hand the rest of stake holders are oblivious of the awareness they do not know pros and cons of the institution to get rid of this low enrollment dilemma.
4. Within the educational institution the basic facilities in order to provide just like a token of incentive to grab their attention towards the school premises.
5. The private schools are informally recommended to run ECE classes through their governing boards and whereas public sector schools run this program with help of stake

holders other than Government and looking forward to executing its implementation and support from Governmental sector.

6. In order to implement the data given by these researches oriented schools the much more initiatives are to be taken by the Government of Sindh.

6. References

- Aly, J. H. (2007). Education in Pakistan: A white paper (revised). *Documentation to Debate and Finalize the National Education Policy*. Islamabad: Government of Pakistan, National Education Policy Review Team. <https://www.voced.edu.au/content/ngv:5218>
- Asghar, M., Munawar, S., & Sittar, K. (2021). EARLY CHILDHOOD EDUCATION AND ITS INFLUENCE ON FUTURE EDUCATION. *Jahan-e-Tahqeeq*, 4(4), 141-153 <http://jahan-e-tahqeeq.com/index.php/jahan-e-tahqeeq/article/view/453>
- Barnett, W. S., Jung, K., Yarosz, D. J., Thomas, J., Hornbeck, A., Stechuk, R., & Burns, S. (2008). Educational effects of the Tools of the Mind curriculum: A randomized trial. *Early childhood research quarterly*, 23(3), 299-313. https://web.dpsctt.ac.uk/wp-content/uploads/2020/08/Educational_Effects_of_Tools_of_the_Mind_Curriculum_Barnett_2008.pdf
- Bassok, D., Fitzpatrick, M., Loeb, S., & Paglayan, A. S. (2013). The early childhood care and education workforce in the United States: Understanding changes from 1990 through 2010. *Education Finance and Policy*, 8(4), 581-601. https://cepa.stanford.edu/sites/default/files/AEFP_ECCE%20Workforce.pdf
- Bates, L. C., Zieff, G., Stanford, K., Moore, J. B., Kerr, Z. Y., Hanson, E. D., ... & Stoner, L. (2020). COVID-19 impact on behaviors across the 24-hour day in children and adolescents: physical activity, sedentary behavior, and sleep. *Children*, 7(9), 1-9 <https://doi.org/10.3390/children7090138>
- Blimpo, M. P., Carneiro, P., Jervis, P., & Pugatch, T. (2022). Improving access and quality in early childhood development programs: Experimental evidence from the Gambia. *Economic Development and Cultural Change*, 70(4), 1479-1529 DOI: <https://doi.org/10.1086/714013>
- Blum, S., & Dobrotić, I. (2021). Childcare-policy responses in the COVID-19 pandemic: unpacking cross-country variation. *European Societies* 23 (S1), S545-S563 <https://doi.org/10.1080/14616696.2020.1831572>
- Bozdogan, A. E. (2012). The Practice of Prospective Science Teachers regarding the Planning of Education Based Trips: Evaluation of Six Different Field Trips. *Educational Sciences: Theory and Practice*, 12(2), 1062-1069. <https://eric.ed.gov/?id=EJ981830>
- Brooks-Gunn, J. (2011). Early childhood education: The likelihood of sustained effects. <https://psycnet.apa.org/record/2011-20779-038>
- Campbell, F., Conti, G., Heckman, J. J., Moon, S. H., Pinto, R., Pungello, E., & Pan, Y. (2014). Early childhood investments substantially boost adult health. *Science*, 343(6178), 1478-1485. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4028126/>

- Chang, C. S., Hsieh, F. J., Chen, T. Y., Wu, S. C., Tzeng, O. J., & Wang, S. (2022). Revisiting dialogic reading strategies with 12-month-old infants. *Early Childhood Education Journal*, 1-14. <https://link.springer.com/article/10.1007/s10643-022-01385-4>
- Cohen, B., Moss, P., Petrie, P., & Wallace, J. (2021). 'A New Deal for Children?'—what happened next: a cross-national study of transferring early childhood services into education. *Early Years*, 41(2-3), 110-127 <https://doi.org/10.1080/09575146.2018.1504753>
- Conti, G., Heckman, J. J., & Pinto, R. (2016). The effects of two influential early childhood interventions on health and healthy behaviour. *The Economic Journal*, 126(596), F28-F65. <https://onlinelibrary.wiley.com/doi/pdf/10.1111/eoj.12420>
- Dunton, G. F., Do, B., & Wang, S. D. (2020). Early effects of the COVID-19 pandemic on physical activity and sedentary behavior in children living in the US. *BMC public health*, 20(1), 1-13 <https://bmcpubhealth.biomedcentral.com/articles/10.1186/s12889-020-09429-3>
- Eadie, P., Levickis, P., Murray, L., Page, J., Elek, C., & Church, A. (2021). Early childhood educators' wellbeing during the COVID-19 pandemic. *Early Childhood Education Journal*, 49(5), 903-913 <https://doi.org/10.1007/s10643-021-01203-3>
- Ghazi, S. R., Ajmal, M., & Saeed, A. (2018). Effectiveness of early childhood education: A case study from remote district of central Punjab. *Journal of Early Childhood Care and Education*, 2(1), 75-86. <http://jecce.aiou.edu.pk/wp-content/uploads/2019/01/06-Effectiveness-of-Early-Childhood-Education.pdf>
- Grantham-McGregor, S., Cheung, Y. B., Cueto, S., Glewwe, P., Richter, L., Strupp, B., & International Child Development Steering Group. (2007). Developmental potential in the first 5 years for children in developing countries. *The lancet*, 369(9555), 60-70. <https://www.sciencedirect.com/science/article/pii/S0140673607600324>
- Gulbrandsen, L., & Eliassen, E. (2013). Kvalitet i barnehager-rapport av strukturell kvalitet høsten 2012.
- Gunindi, Y. (2013). An Evaluation of Social Adaptation Skills of Children with and without Preschool Education Background Based on Their Mothers' Views. *Online Submission*, 3(2), 80-90. <https://eric.ed.gov/?id=ED540916>
- Hamidovna, N. R. (2020). Preparation of children in schools by making technological techniques in pre-school education. *European Journal of Research and Reflection in Educational Sciences*, 8(2), 120-124. <https://www.idpublications.org/wp-content/uploads/2020/02/Full-Paper-PREPARATION-OF-CHILDREN-IN-SCHOOLS-BY-MAKING-TECHNOLOGICAL-TECHNIQUES.pdf>
- Hatton-Bowers, H., Clark, C., Parra, G., Calvi, J., Bird, M. Y., Avari, P., ... & Smith, J. (2022). Promising findings that the cultivating healthy intentional mindful educators' program (CHIME) strengthens early childhood teachers' emotional resources: An iterative study. *Early Childhood Education Journal*, 1-14. <https://link.springer.com/article/10.1007/s10643-022-01386-3>

- Heckman, J. J. (2006). Skill formation and the economics of investing in disadvantaged children. *Science*, 312(5782), 1900-1902. https://jenni.uchicago.edu/papers/Heckman_Science_v312_2006.pdf
- Heikka, J., Pitkäniemi, H., Kettukangas, T., & Hyttinen, T. (2021). Distributed pedagogical leadership and teacher leadership in early childhood education contexts. *International Journal of Leadership in Education*, 24(3), 333-348 <https://doi.org/10.1080/13603124.2019.1623923>
- Herrera, X. P. C., Guevara, P. M. B., Córdova, B. M. V., Maldonado, M. A. B., & Tapia, M. M. P. (2022). Systematization as A Methodology In Teaching Practice And Its Link Within The Teaching-Learning Process In Early Childhood Educators. *Journal of Positive School Psychology* 6(6), 9892-9898 <https://journalppw.com/index.php/jpsp/article/view/9503>
- Hindman, A. H., & Morrison, F. J. (2012). Differential contributions of three parenting dimensions to preschool literacy and social skills in a middle-income sample. *Merrill-Palmer Quarterly (1982-)*, 191-223. <https://web.archive.org/web/20200320184551id/http://mnprek-3.wdfiles.com/local--files/research-studies/Parenting%20Dimensions%20to%20Preschool%20Literacy.pdf>
- Lutfatulatifah, L. (2022). The Development of Golden Triangle Program Using Head Start Approach as an Early Childhood Education Service. *SEA-CECCEP*, 3(01), 42-48 <http://seameo-ceccep.org/journal/index.php/ececp/article/view/35>
- Justice, L. M., Jiang, H., & Strasser, K. (2018). Linguistic environment of preschool classrooms: What dimensions support children's language growth?. *Early Childhood Research Quarterly*, 42(1), 79-92 <https://doi.org/10.1016/j.ecresq.2017.09.003>
- Kim, J. (2020). Learning and teaching online during Covid-19: Experiences of student teachers in an early childhood education practicum. *International Journal of Early Childhood*, 52(2), 145-158. <https://link.springer.com/article/10.1007/s13158-020-00272-6?fbclid=IwAR3xu9vdpJctNnoVQ>
- Krahenbuhl, K. (2014). Collaborative field trips: An opportunity to connect practice with pedagogy. *The Geography Teacher*, 11(1), 17-24. <https://www.tandfonline.com/doi/abs/10.1080/19338341.2013.854264?journalCode=rget20>
- Lee, R., Zhai, F., Brooks-Gunn, J., Han, W. J., & Waldfogel, J. (2014). Head start participation and school readiness: Evidence from the early childhood longitudinal study–birth cohort. *Developmental psychology*, 50(1), 202. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4050643/>
- MacDonald, A., Huser, C., Sikder, S., & Danaia, L. (2020). Effective early childhood STEM education: Findings from the Little Scientists evaluation. *Early Childhood Education Journal*, 48(3), 353-363 <https://doi.org/10.1007/s10643-019-01004-9>
- Magnuson, K. A., Ruhm, C., & Waldfogel, J. (2007). Does prekindergarten improve school preparation and performance?. *Economics of Education review*, 26(1), 33-51. https://www.nber.org/system/files/working_papers/w10452/w10452.pdf

- Maureen, I. Y., van der Meij, H., & de Jong, T. (2020). Enhancing storytelling activities to support early (digital) literacy development in early childhood education. *International Journal of Early Childhood*, 52(1), 55-76 <https://doi.org/10.1007/s13158-020-00263-7>
- Mavilidi, M. F., Bennett, S., Paas, F., Okely, A. D., & Vazou, S. (2021). Parents' and early childhood educators' perceptions on movement and learning program implementation. *International Journal of Environmental Research and Public Health*, 18(22), 1-22 <https://doi.org/10.3390/ijerph182211913>
- Meland, A. T. (2022). Tracking education for sustainable development in ECEC institutions' annual plans. *European Early Childhood Education Research Journal*, 30(5), 791-805 <https://doi.org/10.1080/1350293X.2021.2008464>
- Mubashar, R., Hashmi, A., & Altaf, F. (2020). Factors Affecting Teachers' Practices in Implementation of Early Childhood Care and Education Curriculum in Public Schools. *Global Social Sciences Review* 5 (1), 623-632 [http://dx.doi.org/10.31703/gssr.2020\(V-I\).62](http://dx.doi.org/10.31703/gssr.2020(V-I).62)
- Nawaz, A., Ashraf, I., & Siddique, A. (2021). Impact of Effectiveness of Early Childhood Education on Students Learning Outcomes in Pakistan. *Interdisciplinary Journal of Education Research*, 3(2), 32-39 https://scholar.googleusercontent.com/scholar?q=cache:lrw_jw0FCP8J:scholar.google.com/+Impact+of+Effectiveness+of+Early+Childhood+Education+on+Students+Learning+Outcomes+in+Pakistan+++&hl=en&as_sdt=0,5
- Olson, S. (2012). From Neurons to Neighborhoods: An Update--Workshop Summary. *National Academies Press*. 500 Fifth Street NW, Washington, DC 20001. <https://eric.ed.gov/?id=ED555239>
- Ortiz-Laso, Z., & Diego-Mantecón, J. M. (2020). Strategies of Pre-Service Early Childhood Teachers for Solving Multi-Digit Division Problems. *Sustainability*, 12(23), 1-20 <https://doi.org/10.3390/su122310217>
- Undheim, M., & Jernes, M. (2020). Teachers' pedagogical strategies when creating digital stories with young children. *European Early Childhood Education Research Journal*, 28(2), 256-271 <https://doi.org/10.1080/1350293X.2020.1735743>
- Rahiem, M. D. (2021). Storytelling in early childhood education: Time to go digital. *International Journal of Child Care and Education Policy*, 15(1), 1-20 <https://ijccep.springeropen.com/articles/10.1186/s40723-021-00081-x>
- Ravanis, K. (2022). Research trends and development perspectives in Early Childhood Science Education: an overview. *Education Sciences*, 12(7), 456 <https://doi.org/10.3390/educsci12070456>
- Reardon, S. F. (2011). The widening academic achievement gap between the rich and the poor: New evidence and possible explanations. *Whither opportunity*, 1(1), 91-116. [https://books.google.com.pk/books?hl=en&lr=&id=mF_me7HYyHcC&oi=fnd&pg=PA91&dq=Reardon,+S.+F.+\(2011\).+The+widening+academic+achievement+gap+between+the+rich+and+the+poor:+New+evidence+and+possible+explanations.+Whither+opportuni](https://books.google.com.pk/books?hl=en&lr=&id=mF_me7HYyHcC&oi=fnd&pg=PA91&dq=Reardon,+S.+F.+(2011).+The+widening+academic+achievement+gap+between+the+rich+and+the+poor:+New+evidence+and+possible+explanations.+Whither+opportuni)

- ty,+91-
[116.+&ots=wuga1UH8pf&sig=id7QPwLRfEyFzZZB1Juj_QUNi4&redir_esc=y#v=onepage&q&f=false](#)
- Salin, M., Kaittila, A., Hakovirta, M., & Anttila, M. (2020). Family coping strategies during Finland's COVID-19 lockdown. *Sustainability*, 12(21), 9133
<https://doi.org/10.3390/su12219133>
- San-Bayhan, P., & Artan, İ. (2009). Çocuk gelişimi ve eğitimi [Child development and education]. *Ankara: Morpa Yayınları*.
- Sandseter, E. B. H., Cordovil, R., Hagen, T. L., & Lopes, F. (2020). Barriers for outdoor play in early childhood education and care (ECEC) institutions: Perception of risk in children's play among European parents and ECEC practitioners. *Child Care in Practice*, 26(2), 111-129 <https://doi.org/10.1080/13575279.2019.1685461>
- Smith-Walters, C., Hargrove, K., & Ervin, B. (2014). Methods and Strategies: Extending the Classroom. *Science and Children*, 51(9), 74-78. <https://eric.ed.gov/?id=EJ1037366>
- Spiteri, J. (2021). Quality early childhood education for all and the Covid-19 crisis: A viewpoint. *Prospects*, 51(1), 143-148 <https://doi.org/10.1007/s11125-020-09528-4>
- Syed, S. Z., Asif, M., & Yousaf, A. (2011). Rethinking ECE in Pakistan. *Journal of Elementary Education*, 21(2), 65-76. http://pu.edu.pk/images/journal/JEE/PDF-Files/6_Salma%20Zaidi%20Syed%20Mehwash%20Asif%20%20Amna%20Yousaf%201_2011%20JEE%20Vol%2021%20no.%202.pdf
- Thompson, M. N., & Dahling, J. J. (2012). Perceived social status and learning experiences in social cognitive career theory. *Journal of Vocational Behavior*, 80(2), 351-361. <https://www.sciencedirect.com/science/article/pii/S0001879111001266>
- Timmons, K., Cooper, A., Bozek, E., & Braund, H. (2021). The impacts of COVID-19 on early childhood education: Capturing the unique challenges associated with remote teaching and learning in K-2. *Early Childhood Education Journal*, 49(5), 887-901 <https://doi.org/10.1007/s10643-021-01207-z>
- Von Suchodoletz, A., Larsen, R., Uka, F., Nadyukova, I., Pakarinen, E., & Lerkkanen, M. K. (2022). Investigating quality indicators of early childhood education programs in Kosovo, Ukraine and Finland. *International Journal of Early Years Education*, 30(2), 290-306 <https://doi.org/10.1080/09669760.2020.1848527>
- Wang, M., & Ho, D. (2020). Making sense of teacher leadership in early childhood education in China. *International Journal of Leadership in Education*, 23(3), 300-314. <https://www.tandfonline.com/doi/abs/10.1080/13603124.2018.1529821?journalCode=tedl20>
- Wawire, V. K. (2006). *Factors that influence the quality and relevance of Early Childhood Education in Kenya: Multiple case studies of Nairobi and Machakos Districts* (Doctoral dissertation, Kenyatta University). <http://kerd.ku.ac.ke/handle/123456789/1332>
- Weiland, C., & Yoshikawa, H. (2013). Impacts of a prekindergarten program on children's mathematics, language, literacy, executive function, and emotional skills. *Child*

- development*, 84(6), 2112-2130.
<https://srcd.onlinelibrary.wiley.com/doi/pdf/10.1111/cdev.12099>
- Woolfolk, A., & Perry, N. (2012). Social and emotional development in early childhood. *Child and adolescent development*, 18, 262-309.
- Yang, W., & Li, H. (2022). The role of culture in early childhood curriculum development: A case study of curriculum innovations in Hong Kong kindergartens. *Contemporary Issues in Early Childhood*, 23(1), 48-67 <https://doi.org/10.1177/1463949119900359>
- Zhou, J. (2022). Research on the Design and Practice of Early Childhood Science Education Activities Based on the Concept of STEAM. *International Journal of New Developments in Education*, 4(4), 12-21 <https://francis-press.com/papers/6208>

Vote of Thanks

We are really thankful to the members of editorial and advisory board for their valuable time, suggestions and initiatives made possible to publish this issue.

We are specially thanking to the following reviewers who spent their time and energies to review the papers in time to publish the Second volume, Second issue of SJEST.

1. Dr. Muhammad Kamran Abbasi
2. Dr. Abid Malik
3. Dr. Abida Siddiqui
4. Dr. Razia Fakir Mohammad
5. Dr. Abdul Sattar Gopang
6. Dr. Waheed Ahmed Abbasi
7. Dr. Afshan Huma
8. Dr. Hina Amin
9. Dr. Muhammad Saleem Chang
10. Dr. Iftikhar Ahmed Baig
11. Dr. Muhammad Yousif Sharjeel
12. Dr Gulzar Ahmed
13. Dr Adnan Pitafi
14. Dr. Fahad Sherwani
15. Dr. Jan Alam
16. Dr. Farrukh Jamil

Guidelines for Authors

The authors are required to STRICTLY follow the instructions given below for convenient processing.

Format

The authors are required to strictly follow the APA Style Guide 6th for formatting their papers, failing which the paper will not be accepted for publication.

Paper Length

The length of different papers can be ranged as follows:

Empirical papers (4000 – 8000)

Theoretical papers (4000 – 12000)

Review papers (4000 – 20000)

Paper Layout The paper layout is as follows:

Page setup: A4, Portrait

Margins: Leave 3.00 cm margin on left side; 2.54 cm on top; 0.8 cm on right side; and 2.00 cm on the bottom side of each page

Paragraph Indentation: Indent each new heading with 1 space(s) and apply the indentation consistently throughout the paper

Font & Line Spacing: 12 Times New Roman with 1.0 throughout the entire paper

Page Numbering: Number page consecutively in the bottom corner, beginning with title page

Title of the paper: 16 font Times New Roman BOLD with 1.0.

Abstract must begin with a new page. The abstract page should already include the page header (as given in [APA Style Guide](#)).

Keywords (max. 10 words) from paper must be listed in abstract. The abstract should be a single paragraph between 150 and 250 words.

Different Sections: Mark numbers for separate sections (Use SJEST format given on the journal's website) i.e.

1. Introduction
2. Literature Review
3. Methodology
4. Results
5. Findings and Discussions
6. Conclusion

7. References

References

Please follow the [APA Style Guide](#) of referencing in text and final references.

For formatting details, please download and follow the [APA Style Guide](#). The completed research papers must be given as per above limits of different papers, excluding all figures, tables, references, and the title and abstract page. Final papers SHOULD NOT exceed the upper limit. In case the paper exceeds the limit the editors reserve the right to suggest for edition and modification.



Sukkur IBA Journal of Educational Sciences & Technologies



**DEPARTMENT OF EDUCATION
SUKKUR IBA UNIVERSITY
AIRPORT ROAD, SUKKUR-65200, SINDH, PAKISTAN
PH: 071-5644290 - 5644240**