Sri Lanka Journal of Advanced Research Studies

IN HUMANITIES AND SOCIAL SCIENCES

Volume - 15 / No. 1
January - June 2025

NATIONAL CENTRE FOR ADVANCED STUDIES
IN HUMANITIES AND SOCIAL SCIENCES (NCAS)

Sri Lanka Journal of Advanced Research Studies in Humanities and Social Sciences

Volume 15. No. 1
January-June 2025
ISSN 3084-9144
ISSN: 3084-9152 (Online)

National Center for Advanced Studies in Humanities and Social Sciences
(NCAS)
6A, Sukhastan Gardens, Ward Place, Colombo 07, Sri Lanka
2025

Foreword

We are honoured to release the **Volume 15, Issue I** of ***Sri Lanka Journal of Advanced Research Studies in Humanities and Social Sciences*** **(SLJARS)** by keeping our promise to the academia to share, care and disseminate new research findings, especially related to the disciplines of Humanities, Social Sciences, Law, Education and Management Studies with the sole understanding of our responsibility to the engaged community as a National Centre for Advanced Studies in Humanities and Social Sciences (NCAS). This issue brings to the surface some empirical knowledge on Sri Lankan society and the prolonged discussion on various topics to enhance the critical awareness for the goodwill and benefit of the society. Most of the articles included in this issue bring up some important points, i.e. cybercrimes, stock market, and digital literacy, which are some growing concerns in today's world. The subject content of these research papers evolves some important facts related to policy implementations and enactments in terms of achieving sustainable goals.

As the only research institute in Sri Lanka governed by the *Universities Act No. 16 of 1978*, NCAS remains committed to promote and extend high-quality research that integrates academic rigor with societal relevance. It is a known fact that the rapid technological changes cannot overstate the undeniable values of human behaviour and needs, importance of human intellect, ethical and natural judgment, and cultural understanding. Research on human behaviour, society and cultural identities continues to play a pivotal role in addressing contemporary challenges and informing evidence-based decision-making.

The contributions featured in this volume reflect the interdisciplinary approach, especially through the practices of laws, human rights, demonstrating their engagement with empirical data and methods, and policy-oriented analysis. Each article represents a meaningful scholarly contribution, whether through the exploration of historical processes, cultural interpretations, or critical examinations of present-day social issues.

SLJARS is a **peer-reviewed journal**, published biannually under a **double-blind review process**, and has been recognized by *Sri Lanka Journals Online (SLJOL)* since 2007. The journal continues to serve as a respected platform for scholarly dialogue and intellectual exchange at national and international levels.

I extend my sincere gratitude to the authors, reviewers, and the editorial team for their dedication and scholarly commitment. Their efforts ensure the continued academic integrity and relevance of the journal. I am confident that the research presented in this issue will inspire future scholarship and contribute constructively to the advancement of knowledge and society.

Professor (Mrs.) Prashanthi Narangoda
Director/NCAS

Published by
National Center for Advanced Studies in Humanities and Social Sciences (NCAS)
6A, Sukhastan Gardens, Ward Place, Colombo 07, Sri Lanka
Sri Lanka Journal of Advanced Research Studies in Humanities and Social Sciences
Vol. 15 No. I, 2025

Cover Page Design
Palinda Rasanjith Medage

NCAS Research Journal is a bi-annual research journal of the NCAS, Colombo, Sri Lanka. It seeks to provide a platform to the academics, practitioners, policy makers and other stakeholders of various dimensions of to present their research findings and to debate on issues of mutual and common interests for the benefit of the local and global community

* Sri Lanka Journal of Advanced Research Studies in Humanities and Social Sciences is a continuation of **the Sri Lanka Journal of Advanced Social Studies** published since 2011, which is registered under Sri Lanka Journals online (https://sljass.sljol.info/)

Content

Socio-economic impact of multi-hazards on urban settings: possible approaches to building resilience among urban communities in Sri Lanka as learned from the COVID-19 Pandemic

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Abstract

The detrimental impacts of the COVID-19 pandemic on socio-economic structures were doubled due to many countries encountering concurrent hazards, particularly climate-induced hazards. The impact of such compound hazards on urban communities was intense and complex for several reasons. On the other hand, the vulnerability of urban communities was a significant factor during compound hazards, as preparedness and response measures became crucial for addressing the full spectrum of urban diversity. This paper aims to investigate the socio-economic impacts of the COVID-19 pandemic and the compounded hazards encountered during it on urban societies across Sri Lanka, with a focus on vulnerable groups. A desk study was conducted in two stages to collect data. The first stage involved a comprehensive search of international peer-reviewed literature on urban planning, multi-hazard risk management, urban resilience frameworks, and disaster vulnerability. In the second stage, the research focused on examining various studies that assess the implications of COVID-19 and concurrent hazards concerning the socio-economic effects on urban society in Sri Lanka. Data was analysed using the thematic approach. Findings suggest that urban, vulnerable communities have been more adversely affected than their relatively well-off counterparts. In a multi-hazard context, these vulnerabilities can be compounded, pushing such communities into greater deprivation. While urban resilience is key to mitigating multi-hazard risk, it is important that equity and justice concerns are embedded in resilience-building efforts.

***Keywords**:* COVID-19 pandemic, Urban communities, Vulnerable communities, Multi-hazards

Introduction

The outbreak of the contagious SARS-CoV-2 virus paralyzed global social and economic structures, putting resource-limited nations in serious jeopardy due to their fragile socio-economic conditions and a lack of preparedness for such a significant disease outbreak. Many countries faced concurrent hazards during the critical stage of the COVID-19 pandemic, including volcanic eruptions, floods, landslides, hurricanes, tornadoes, and other epidemics like dengue and Ebola. This made it extremely challenging to respond to and prepare for multiple hazards simultaneously. As a result, the COVID-19 era served as a wake-up call for many governments, prompting them to develop more sustainable infrastructure, governance, and policies aimed at enhancing disaster resilience, particularly in the context of multi-hazards (Hariri-Ardebili, 2020; Rogers et al., 2020; UNDRR, 2020).

The scale of impact can vary based on the nature and intensity of an event, regardless of whether the hazard is natural, biological, or man-made. However, the impact of multi-hazards tends to be much more severe due to the complexity and cascading nature of risks and vulnerabilities associated with concurrent hazards, compared to those posed by standalone hazards (Quigley, Attanayake, King, & Prideaux, 2020, Kamalrathne et.al 2024). Many such events were reported during the COVID-19 pandemic. For instance, the Pacific Islands, particularly Vanuatu and Palau, experienced Cyclone Harald alongside a prolonged drought, while Indonesia faced significant challenges from heavy rain and flooding amid the COVID-19 outbreak (UNDRR, 2020). In Congo, two health epidemics, including an Ebola outbreak, coincided with the COVID-19 pandemic (Nachega et al., 2020). Roth (2021) noted similar concurrent incidents during the Ebola epidemic and the COVID-19 pandemic in Guinea. India also encountered adversities due to Cyclone Amphan, along with a deadly fungal infection known as black fungus, during the COVID-19 pandemic (Dyer, 2021). Several European countries experienced massive flooding, and the Spanish Island of La Palma suffered a volcanic eruption followed by numerous earthquakes, which forced the evacuation of over 6,000 people from the surrounding areas. These combined hazards, faced by various countries, highlight the urgent need to build resilience in the context of multi-hazard situations (Kamalrathne et.al, 2024).

Research suggests that socially and economically vulnerable communities face greater risks during situations involving multiple hazards. Multi-hazard scenarios can lead to a range of cascading effects, which can be categorized as primary, secondary, and tertiary impacts (Quigley et al., 2020; UNDRR, 2020; Wu, 2020). In this context, the disaster risks faced by the most vulnerable groups often become critical due to marginalization, resource deprivation, and challenging geo-social conditions. Among these vulnerable populations, the urban poor—including street families, those without shelter, and residents of shanty towns and slums—have been significantly affected by the adverse effects of COVID-19. Additionally, certain urban communities have been identified as neglected groups that should be prioritized in urban development initiatives and regeneration programs, particularly in developing countries (HiPCITYHUB, 2021). Recognizing the importance of this pressing issue, there have been proposals to focus on building resilience in post-pandemic development programs as a strategy for multi-hazard preparedness in many developing nations (Salama, 2020). Addressing this critical gap this paper intends to explore key challenges faced by urban communities due to compound hazards encountered during the COVID-19 pandemic.

Methodology

This paper aims to investigate the socio-economic impacts of the COVID-19 pandemic and compound hazards encountered during the pandemic on urban societies across Sri Lanka, with a focus on vulnerable groups such as underserved settlers, informal workers, migrant workers, and small and medium-sized enterprises. The research has two main objectives: first, to thoroughly examine the various dimensions of socio-economic impacts on these urban communities, and second, to explore strategies for building urban resilience to different types of hazards, drawing on knowledge from global best practices and lessons learned from mitigating the impact of COVID-19. The research will adopt an interpretivist epistemological perspective, recognizing that understanding socio-economic risks requires insight into the real-life situations affecting societies and communities.

The first stage involved a comprehensive search for international peer-reviewed literature related to urban planning, multi-hazard risk management, urban resilience frameworks, and disaster vulnerability. This search utilized academic databases including Web of Science, Scopus, and Google Scholar.

The search terms were derived from a preliminary scoping review and included keyword combinations such as "urban resilience," "multi-hazard," "COVID-19," "pandemic," "vulnerable communities," "informal settlements," and "disaster preparedness."

In the second stage, the research focused on examining various studies that assess the implications of COVID-19 and concurrent hazards concerning the socio-economic effects on urban society in Sri Lanka. This focus was the driving force behind the second phase of the study. Aligned with Denzin (2012), the research incorporated various forms of secondary data, including statistics and reports from the Disaster Management Centre, the Ministry of Health, the Department of Census and Statistics, the Urban Development Authority, and the Central Bank of Sri Lanka. It also included reports from international institutions such as the World Bank, the United Nations, and the International Labour Organization. Data analysis was conducted using a thematic strategy.

Results and discussion

Socio-economic Impacts of COVID-19 on Vulnerable Communities in Urban Areas

a) Increased risk of infection and economic deprivation among underserved settlers in Sri Lanka

The city of Colombo, regarded as Sri Lanka's commercial and industrial hub, has seen a rise in the influx of migrants from rural areas over the past couple of decades. Rural residents migrate permanently to cities with aspirations of improved living conditions, lucrative income generation opportunities and better education for children. However, increased internal migration from impoverished rural areas to urban areas, coupled with globalisation and industrial relocation have not only facilitated the spatial expansion of urban areas but also resulted in the creation of unplanned underserved settlements.

A survey carried out by the Urban Development Authority (2011) of Sri Lanka has estimated that approximately 68,812 households live in 1,499 underserved settlements in Colombo. These settlers account for more than 53% of the total population in Colombo city, while their settlements make up around 9% [around 900 acres] of the city’s total land area (Urban Development Authority, 2017). These settlements have been mainly established as encroachments on government-owned land, reservations or land

owned by private institutions (Urban Development Authority, 2017; Razick, 2014).

Underserved settlements are characterised by poor, unhygienic living conditions that have been conducive to COVID-19 transmission. These settlements lack basic amenities such as water, ventilation, sanitation, drainage, waste collection and sewers, while the possibility of physical distancing and self-quarantine has been constrained due to space limitations and overcrowding in the settlements (Corburn et al., 2020; United Nations – Sri Lanka, 2020). In Sri Lanka, certain large COVID-19 clusters were reported from small, urbanised areas that constituted underserved settlements. The COVID-19 cluster reported from Bandaranayake Mawatha, Colombo exemplifies how the risks of pandemics are interwoven with poverty, deprivation and marginalisation (Karunanayake, 2020). The said cluster consisted of a restricted and congested living space where around 62 families resided on a 20 perch land. The housing units not only lacked basic services such as those mentioned above, but also were too small and congested to allow for physical distancing and self-quarantine (Karunanayake, 2020). Furthermore, the livelihoods of underserved settlers have been highly vulnerable to the unfavourable economic effects posed by the pandemic, as the majority of these settlers are employed in the informal sector. Loss of livelihoods have pushed these settlers into further deprivation and marginalization resulting in such settlers being trapped in debt and poverty cycles that transgress generations.

b) Livelihood vulnerability among informal sector workers

The informal sector makes up a significant proportion of total employment in Sri Lanka. For instance, informal employment in the country accounts for approximately 90% of agriculture sector employment, 66% of secondary/industry sector employment and 52% of tertiary/service sector employment. While job losses induced by COVID-19 have been experienced by people from all strata of society, the livelihoods of informal sector workers have been at a greater risk (The World Bank, 2021). For example, construction has been identified as one of the salient industries in urban areas of Sri Lanka given the largest proportion of its output being generated in the Western Province: the region with the highest rate of urbanisation in Sri Lanka (Central Bank of Sri Lanka, 2020). The industry particularly stands significant in terms

of creating employment opportunities for unskilled workers, many of whom are daily wage earners (Wijeratne, 2019). Lockdown measures imposed, particularly in response to the first wave of the pandemic have temporarily halted activities of construction projects. This has resulted in a substantial loss of income for daily wage earners in the industry and has therefore induced them to shift to agriculture-based occupations. This would result in a shortage of labour for the construction industry during the pandemic recovery phase (Siriwardana & Jayasekara, 2020).

Several reasons can be attributed to the disproportionate effects posed by the pandemic on the livelihoods of informal sector workers. Primarily, records indicate that informal employment and poverty go hand in hand. A recent study by the World Bank (2021) on the economic and poverty effects of COVID-19 has demonstrated that informal sector employment is concentrated within the lower end rather than the upper of the earnings distribution. Therefore, informal sector workers are characterised by pre-existing vulnerabilities such as low income, deprivation and poor living conditions which undermine their capacity to effectively cope with external shocks. Secondly, informal sector workers do not have access to job-related social protection benefits such as unemployment insurance. Neither are these workers adequately targeted by social protection schemes such as welfare programs administered by the Government of Sri Lanka (Institute of Policy Studies, 2018).

In addition to this, informal sector workers have not been entitled to emergency relief, assistance and support provided by organisations in response to the COVID-19 pandemic. For example, the Sri Lanka Tourism Development Authority [SLTDA] has taken the initiative to provide relief measures and support to smaller and vulnerable stakeholders such as tourist drivers and tour guides who were registered with SLTDA prior to COVID-19, thus deviating from their former practice of providing support to predominantly larger stakeholders (Sri Lanka Tourism, 2020). Nevertheless, informal sector workers have not been able to benefit from such relief measures.

This has been highlighted by the Chairperson of the Sri Lanka Tourism to Lanka Business Online who confirmed that, “unfortunately, since 60% of the tourist service providers in Sri Lanka belongs to the informal sector who haven’t registered with SLTDA, many have not been able to avail the relief

measures which is brought to authority's notice" (Lanka Business Online, 2020).

c) Loss of livelihood opportunities for migrant workers

Residents of Sri Lanka's rural and estate sectors frequently relocate to cities in pursuit of better employment prospects. For instance, records show that the estate industry has consistently suffered from high rates of malnutrition and poverty (Jayawardena, 2018; Ranathunga & Gibson, 2015). In the past, the estate sector—which is mainly made up of rubber and tea plantations—has been marked by low pay, subpar housing, and restricted access to essential services, which has strongly encouraged out-migration to urban areas (Shanmugaratnam, 2000). According to a study by Dharmadasa et al. (2018), out-migration of skilled workers from the estate sector has significantly decreased the depth and severity of poverty, despite being detrimental to the productivity of the plantation industry, particularly the tea industry.

Internal migration trends in Sri Lanka show that rural migrants seeking jobs in construction, manufacturing, domestic work, and the service sector primarily migrate to urban areas, especially Colombo and the surrounding districts (Department of Census and Statistics, 2012). These migrants frequently take on unstable jobs, such as daily wage work and informal contracts, which offer greater earning potential than rural wages but little job security (Hettige & Mayer, 2000). According to Kelegama and Tilakaratna (2014), the remittances sent by these urban migrants are a major source of income for rural households, improving living conditions, supporting children's education, and reducing poverty in sending communities.

However, the COVID-19 pandemic's economic effects led to a reverse migration of workers, forcing those who had left estates in pursuit of better employment opportunities to return because they had lost their jobs. Migrant workers immediately lost their jobs as a result of the lockdown measures put in place during the pandemic, especially those working in the unorganised sector without social security or employment contracts (World Bank, 2021). Many migrants were forced to return to their rural homes due to their inability to pay for urban living expenses without income and their inability to access social assistance programs (United Nations Sri Lanka, 2020). This reverse migration phenomenon was observed across South Asia, with similar patterns

reported in India and Bangladesh, where urban-to-rural return migration intensified existing vulnerabilities in rural areas (Ratha et al., 2020).

In light of the findings of Dharmadasa et al. (2018), it is plausible to argue that such reverse migration is likely to intensify poverty among estate sector households, given the absence of remittances from migrant workers, thus pushing them into further deprivation. The sudden influx of returnees to rural and estate areas created additional pressure on already limited local employment opportunities and resources (Arunatilake & Jayawardena, 2010). Furthermore, the psychological and social impacts of failed migration attempts, including loss of dignity, accumulated debt, and disrupted social networks, compounded the economic hardships faced by these workers and their families (De Silva & Sumarto, 2018).

The pandemic also highlighted the vulnerability of circular migrants, or workers who relocate between rural and urban areas for work on a seasonal or periodic basis. When movement restrictions were put in place, these workers—who make up a sizable portion of the urban informal workforce—found themselves stranded without support systems (Gunatilleke et al., 2021). Many migrant workers were left in limbo when they were denied access to emergency relief programs due to a lack of proper documentation, official employment records, or proof of urban residency (Institute of Policy Studies, 2020).

Additionally, children of migrant workers, many of whom had attended urban schools, were impacted by the disruption to their education brought about by reverse migration. Returning to rural areas frequently meant dropping out of school or moving to a school with fewer resources, which could prolong poverty cycles across generations (UNICEF Sri Lanka, 2020). Due to their disproportionate employment in industries severely impacted by the pandemic, such as domestic work and clothing manufacturing, and the fact that they frequently took on additional care responsibilities upon returning to rural households, women migrant workers faced unique difficulties (Ruwanpura, 2021).

This reverse migration has long-term effects that go beyond short-term financial losses. In addition to changing labour market dynamics in both sending and receiving regions and requiring policy interventions that address the structural vulnerabilities that make migrant workers especially vulnerable to economic shocks, the disruption of established migration patterns may also

change rural-urban linkages (Jayasuriya & Weerakoon, 2021). Building resilience among migrant workers requires inclusive urban planning that takes into account the needs and rights of temporary and migrant populations, formal recognition of employment in the informal sector, and comprehensive social protection systems that are portable across geographic locations (International Labour Organisation, 2020).

d) Loss of earnings for small and medium-scale businesses

The economic effects of COVID-19 have been more adverse on Small and Medium Scale Enterprises [SMEs] than on larger businesses. For instance, the Small and Medium Garment Exporters Association (SMGEA), which has 80 factories under its membership, reports that small- and medium-scale businesses in the textiles and garments sector have been the most severely affected, particularly due to limited working capital resulting from order cancellations. Apart from this, most SMEs within the textiles and apparel industry source raw materials, such as accessories and fabrics, from wholesale agents who import them from China and India. Lockdown, travel and trade restrictions imposed due to COVID-19 have resulted in a supply chain breakdown, which obstructed production in SMEs in the textiles and apparel industry (Gunawardana, 2020).

Additionally, SMEs have lacked access to forms of formal financial support to survive the pandemic period. Elucidating this, the Business Resurgence Survey Report [2001], jointly published by the Federation of Chamber of Commerce and Industry of Sri Lanka (FCCISL) and PWC Sri Lanka, reveals that only 20% of SMEs surveyed have benefited from the Central Bank-supported refinance schemes that have been administered through banks and other financial institutions. The same survey reveals that 11% of the SMEs were awaiting approvals for such support. On the other hand, 36% of SMEs have been compelled to resort to financial support from informal sources such as family, friends and well-wishers, while 87% of SMEs have not received any kind of financial assistance (FCCISL & PWC, 2021). As a result of these, the very survival of SMEs in this sector has been challenged.

Further, with reference to the tourism sector, Gunawardena (2020) reveals that many of the indirect employment opportunities generated from the industry's value chain are linked to small and medium-scale enterprises

operating as handicraft traders, gem and jewellery shops, laundries, liquor shops etc. The author simultaneously emphasises that the ripple effects of the pandemic have been worse for such players because they are "(i) are too small to downsize, (ii) are less diversified in their economic activities, (iii) have lower capitalisation, and (iv) lack various financing options" (Deshapriya & Nawarathna, 2020, p. 5).

e) Health vulnerability among urban sector workers

Free trade zone (FTZ) workers are a key group within Sri Lanka's urban workforce. Women employed in the textiles and apparel sector, many of whom have migrated from rural areas for employment, constitute the majority of FTZ workers (Rajapakse et al., 2018; Business and Human Rights Resource Centre, 2020). Factories in these zones became major infection sites during the second wave of COVID-19, which began in early October 2020 following the detection of a cluster of over 1,000 cases linked to an apparel factory in Minuwangoda, Gampaha (Amaratunga et al., 2020; Rodrigo, 2020; PTI, 2020). As FTZ factories emerged as prime sites for viral transmission, the health and safety of FTZ workers were placed at significant risk.

The living conditions of resident workers were a key factor contributing to the heightened risk of infection. While some FTZ workers reside in factory-operated hostels, most live in privately run residences surrounding major urban zones, commonly referred to as boarding houses. Conditions in these residences are often overcrowded, with rooms shared by two to five people, toilets shared among 20 to 30 residents, shared bathing areas, poor ventilation, and limited space (Gunawardana & Padmasiri, 2021). Beyond overcrowded housing, shop floor labor regimes also indirectly contributed to increased infection rates. Studies show that strict managerial control on the shop floor limited workers' ability to access timely healthcare, even when they were showing symptoms of COVID-19 (Hewamanne, 2021; Wickramasingha, 2022).

Construction workers also constitute an important segment of the urban sector workforce. Studies document measures taken by construction authorities to enhance worker welfare during the COVID-19 pandemic, such as relocating workers to dormitories outside construction sites, possibly due to limited space within the sites themselves.

However, the implementation of health and safety measures at construction sites remained nascent. For instance, Niroshana et al. (2021) find that although concern for health and safety practices among construction authorities increased during the early lockdown period, this heightened attention was not sustained in later phases of the pandemic. Moreover, while the use of face masks and dust masks increased with the onset of COVID-19, the use of personal protective equipment (PPE) more broadly remained low. The same study also reports inequalities in access to services such as screening facilities, quarantine strategies, and testing between laborers and higher-level construction staff (Niroshana et al., 2021).

Dimensions and approaches of urban resilience in understanding vulnerabilities in the context of multi-hazard: An Overview of Best Practices from the Global Context

This section describes some of the key dimensions and approaches of urban resilience that have been recognised and proposed as best practices in the global literature. These dimensions and approaches are discussed in light of their applicability and potential for addressing the socio-economic issues faced by urban, vulnerable communities expounded above. In the review of global literature, three interrelated dimensions were identified as critical components of resilience in urban communities: society and well-being, the economy, and governance and institutions.

Society and Well-being

It is evident through the issues discussed above that the effects of the pandemic have been more adverse on communities with pre-existing vulnerabilities. Corresponding to this, at the global level, literature on the dimension of 'society and wellbeing' places emphasis on the inclusion of different layers of the community in the urban planning process, especially the vulnerable groups, marginalised groups, different age groups, gender and ethnicities (UN-Habitat, 2024; Patel et al., 2020). These communities should be incorporated throughout the urban planning process for better and more sustainable results. Safety and well-being criteria improve the stability of these communities. Safe and healthy communities are more capable of withstanding and responding to shocks (Shi et al., 2022; Nieuwenhuijsen & Braubach, 2024). Because the effects of catastrophes are typically felt unevenly in communities, with

disadvantaged groups bearing the brunt of the burden, equity and diversity are critical (Kumi-Amoah et al., 2024). Improving equity will be an effort to address this issue.

Public Participation

Further, under the main area of society and wellbeing, public participation has been frequently highlighted in the academic literature. Public participation can be defined in a number of ways that reflect the specific objectives of an organisation or a project. Public participation is identified in two broad areas in studies as a means and participation as an end (Wallin et al., 2024; Owuondo, 2024). Participation as a means aims at more effective implementation of urban planning programmes and projects through active citizen involvement in project implementation through labour and/or financial or in-kind contributions. This is a major factor in the implementation stage of the urban planning process, where the project's execution is permanently evaluated and monitored, and implementation technical sheets are defined with the aim of providing efficiency profits to all levels of sustainability (Anthony Jnr, 2023). This has been frequently employed worldwide during reconstruction and relocation after a hazardous event as well.

Participation as an end implies that citizens come up with ideas, take part in the decision-making process, assume responsibility and finally arrive at self-management (Moore & Thompson, 2024). As an example, consulting with the community and relevant stakeholders is an important part of urban land-use planning to ensure transparency and incorporate a wide range of interests into the overall urban plan (Konsti-Laakso & Rantala, 2024). This was highlighted in most of the studies where communities and key stakeholder groups play a significant role in the urban land use planning process.

Social Capital

Another aspect of society and community well-being refers to social capital, such as place attachment, secure and healthy communities, equity and diversity for vulnerable groups, and contextual knowledge for the learning process (Xiong & Li, 2024; Shah et al., 2024). Levels of social capital are believed to be associated with levels of resilience among individuals and the community (Zhang et al., 2024; Fazey et al., 2022). This society and well-being factor has garnered a lot of attention in the urban resilience literature,

and it is thought to have a big impact on community self-sufficiency and resilience (Liu et al., 2025). This represents an acknowledgement that physical and engineering solutions alone will not suffice to create resilient communities.

In the Sri Lankan context, successful mitigation of the socio-economic issues induced by the pandemic on underserved settlers may call for upgrading their living conditions through relocation to improved living environments with better housing facilities and disaster-resilient features. While a number of such projects have been executed for purposes of urban regeneration in Sri Lanka, in light of the discussed literature, it's crucial that such relocation projects encourage settlers' participation both as a means and an end while preserving their social networks and support systems. This can potentially serve to overcome the resistance of settlers to relocate, thereby ensuring the effectiveness of such projects.

Economic Resilience

Considering the unfavourable effects posed by COVID-19 on the livelihoods of vulnerable communities such as informal sector workers, migrant workers and SMEs, building economic resilience stands paramount in efforts to enhance urban resilience. The capacity and skilfulness of a community's working population to sustain its dependent population determines its economic resilience. The availability of well-paying jobs is also related to resilience (Taqwa & Setiawan, 2025; Khan & Emon, 2024). Economic resilience, with its security, stability, and dynamism, ensures the redistribution of goods and resources for both individuals and society to recover from disaster damage. The protection and development of livelihood in a hazardous scenario, in particular, is critical for resilience since it provides the foundation for adapting to tough situations (Sinniah et al., 2024).

Business Continuity and Economic Diversity

Appropriate planning is required to minimise potential business disruptions. The existence of a business mitigation plan will be critical for this aim. To protect the community's economic stability, such a strategy should contain financial instruments and insurance programmes (Krishnan et al., 2024).

Community members should be aware of the value of community savings for increasing redundancy and resourcefulness, as well as the

importance of collective resource ownership for keeping access to resources where competition is fierce. Inward investment and economic diversity are markers of a community's ability to attract and retain firms while mitigating the negative effects of economic decline (UN, 2024; Lamorgese et al., 2024). Communities that rely on a single industry will be more exposed to disruptions. To secure inbound investment and business continuity, both large and small enterprises are required.

There is evidence that local small companies, as opposed to massive chain stores, are more effective in keeping money circulating within the local economy (SEED, 2021). This also generates additional tax income and strong networks via which local businesses interact and employ local workers. Integration with the regional economy and partnership agreements are also vital for improved shock absorption and a faster recovery process (Ali et al., 2023). In addition, public-private partnerships are required to appropriately prepare individual firms and urge them to participate in collective efforts (Patel & Kumar, 2024).

Governance and Institutions

Efforts to build resilience among urban communities should be backed by effective institutional collaboration. Governance and institutions play a crucial role in guaranteeing the continuous operation of urban systems before, during, and after a disaster (Dai et al., 2024; Nieuwenhuijsen & Braubach, 2024). Further, the government should empower the institutions and facilitate them in the process (Zhang et al., 2021). Studies have highlighted the importance of a common platform for experts and these institutions to present their plans, findings and innovations in urban planning (Wang et al., 2021).

Worker Safety and Health

Further, given the increased risk of pandemics to the health and wellbeing of urban sector workers such as FTZ and construction workers, it is important that governance in the context of urban resilience prioritizes worker welfare and occupational health and safety. This may involve establishing provisions to ensure adequate worker facilities (e.g., residential accommodations) and embedding appropriate health and safety practices within relevant policies and regulatory frameworks (Trias & Cook, 2021). Moreover, the Media as a stakeholder should be used to empower the early warning, awareness and

hazard education systems, which play a key role in urban planning in those disaster-prone regions (Gautam & Khadka, 2024).

Conclusion

The effects of COVID-19 have been disproportionate. Urban, vulnerable communities have been more adversely affected than their relatively well-off counterparts. In a multi-hazard context, these vulnerabilities can be further compounded, pushing such communities to further deprivation. While urban resilience is key to mitigating multi-hazard risk, it is important that equity and justice concerns are embedded in resilience-building efforts. Further, it is necessary that urban resilience is viewed and achieved as a holistic outcome of urban planning and development. The paths to urban resilience are complicated and reliant on interdependencies, necessitating an understanding of a city in parts as well as a whole. This is consistent with the statements of some researchers that there is a need for more comprehensive assessments that take into account urban resilience as a whole. As a result, more comprehensive evaluations that take into account different dimensions of urban resilience may be required to provide the necessary knowledge for decision-making and actions to address the dangers and uncertainties that urban communities face. Finally, it's of critical importance for the resilience-building process to be backed by multi-sectoral institutional collaboration and a legislative and policy environment that allows for such a mechanism.

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Cyber Law Reform for Human-Centred Governance in Sri Lanka

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Abstract

Cybercrime has become a major governance challenge, threatening public trust, human rights, and national security. Sri Lanka's Computer Crimes Act (2007) and related legislation have not kept pace with emerging risks such as ransomware, AI-driven fraud, and crypto-enabled offences. This study examines the adequacy of Sri Lanka's cybercrime framework in addressing contemporary threats and aligning with global rights-based standards. Using a hybrid qualitative methodology combining doctrinal legal analysis and expert interviews with judges, policymakers, and cybersecurity professionals, the research identifies three core deficiencies: outdated legal definitions, weak rights safeguards, and fragmented institutional coordination. Drawing on international benchmarks such as the Budapest Convention, GDPR, and NIS2 Directive, the paper proposes a four-layered reform framework founded on human rights, institutional capacity-building, international harmonisation, and adaptive governance. The proposed reforms aim to guide policymakers towards a modern, transparent, and citizen-centred cyber law regime that enhances digital resilience and democratic legitimacy in Sri Lanka and offers a transferable model for other developing jurisdictions.

Keywords: Cybercrime, Legal Reforms, Human Rights, Sri Lanka, Policy Innovation, Digital Justice, Governance

Introduction

Cybercrime represents one of the most pressing governance and human-rights challenges of the twenty-first century. As societies undergo digital transformation, states are compelled to adapt legal frameworks that safeguard both national security and individual liberties. The World Economic Forum identifies cyber threats as one of the five greatest global risks, comparable to climate change and geopolitical instability. For Sri Lanka, the challenge lies

not only in technological vulnerability but also in ensuring that its cyber laws reflect democratic values, due-process guarantees, and international cooperation. In the aftermath of the COVID-19 pandemic, rapid digitisation accelerated Sri Lanka's dependence on digital platforms for commerce, education, and governance. More than twelve million citizens now rely on online systems, yet the principal legal instrument the Computer Crimes Act (CCA) No. 24 of 2007 remains largely unchanged since its enactment nearly two decades ago. The Act was drafted before the emergence of artificial intelligence, ransomware-as-a-service, and decentralised blockchain ecosystems. Consequently, Sri Lanka's legal regime does not adequately address AI-driven fraud, data-poisoning attacks, or cross-border crypto-crimes that transcend territorial jurisdiction.

The conceptual foundation of cyber law reform rests on the social-contract principles articulated by John Locke (1689), who emphasised liberty, accountability, and the consent of the governed. Modern cybersecurity governance must therefore integrate technological safeguards with constitutional oversight and participatory decision-making. However, many developing democracies including Sri Lanka continue to adopt executive-driven legal reforms without sufficient stakeholder consultation. This has led to an imbalance between securitisation and civil liberties, undermining both legitimacy and public trust.

Recent comparative developments illustrate a widening policy gap. India's Digital Personal Data Protection Act (2023) introduces consent-based processing and breach-notification obligations; Singapore's Cybersecurity Act (2018) mandates critical-infrastructure audits and incident reporting; and the European Union's NIS2 Directive (2023) sets harmonised resilience standards across essential sectors. In contrast, Sri Lanka lacks integrated mechanisms for rights protection, institutional coordination, and international interoperability. The result is a fragmented system where agencies such as the CERT, ICTA, and law-enforcement divisions operate with overlapping mandates and limited accountability.

This study therefore examines how Sri Lanka's cybercrime framework can be modernised through a rights-based and policy-oriented approach. It aims to:

(1) identify doctrinal and institutional gaps in the existing legislation;

(2) analyse alignment with international legal instruments such as the Budapest Convention and GDPR; and

(3) propose a layered policy framework to strengthen governance, transparency, and digital trust. By framing cybercrime law reform as a governance and human-rights imperative, this paper positions Sri Lanka's experience within a broader discourse on inclusive and future-oriented digital policymaking.

Methodology

This study adopts a hybrid qualitative methodology that integrates doctrinal legal analysis with semi-structured expert interviews to explore how Sri Lanka's cybercrime legislation aligns with global human-rights standards and governance frameworks. The approach is interpretive and exploratory rather than hypothesis-testing, consistent with the traditions of socio-legal and policy research.

Doctrinal Analysis

The doctrinal strand critically examines key statutory instruments namely the Computer Crimes Act (2007), Electronic Transactions Act (2006), Personal Data Protection Act (2022), and Online Safety Act (2024) against international instruments such as the Budapest Convention (2001), General Data Protection Regulation (2018), and the EU NIS2 Directive (2023). The analysis evaluates six domains regarded as pillars of effective cyber law: offence definitions, procedural powers, digital-evidence admissibility, privacy safeguards, institutional coordination, and international cooperation. Each domain is assessed for consistency with principles of proportionality, legality, and rights-based oversight.

Expert Interviews

To complement the textual analysis, five semi-structured interviews were conducted between May and July 2020 with purposely selected experts representing the judiciary, legal profession, academia, industry, and policy sector. Participants included an appellate-court judge, a senior lawyer, a cybersecurity consultant, a university legal scholar, and a government policymaker. Each interview lasted approximately 90 minutes and followed a

flexible guide addressing four themes: definitions and typologies of cybercrime, institutional capacity, cross-border cooperation, and reform priority.

Data Analysis

Interview transcripts were thematically analysed using Braun and Clarke's six-phase framework familiarisation, coding, theme generation, review, definition, and reporting to integrate doctrinal insights with practitioner perspectives. Triangulation between sources ensured analytical rigour, while reflexive memoing preserved interpretive depth. This hybrid design provided an empirically grounded and normatively coherent basis for formulating the layered reform framework presented in subsequent sections

Findings

The analysis identified three interconnected domains of deficiency within Sri Lanka's cybercrime legal framework: (1) legislative and definitional gaps, (2) rights-protection weaknesses, and (3) institutional and procedural shortcomings. These themes emerged consistently across doctrinal review and expert interviews, underscoring the urgency for a coherent, rights-based reform agenda.

Legislative and Definitional Gaps

The Computer Crimes Act (2007) remains the central instrument for prosecuting cyber-related offences; however, its language reflects a pre-AI era. Interviewees highlighted several deficiencies:

Outdated offence categories: The Act employs technology-neutral definitions that fail to capture algorithmic manipulation, data-poisoning, or cloud-based intrusions.

Absence of AI, ransomware, blockchain and cryptocurrency provisions: Neither the CCA nor related statutes recognise AI-driven deception, ransomware-as-a-service, or decentralised-finance frauds.

Ambiguity in digital-evidence rules: Courts lack clear criteria for admissibility, authenticity, and chain-of-custody. Hence evidence is often dismissed or delayed because forensic procedures are undefined.

Limited cross-border enforceability: Mutual Legal Assistance Treaties (MLATs) remain inactive, restricting collaboration with jurisdictions under the Budapest Convention.

These legal gaps weaken deterrence and complicate prosecution of complex cyber-offences that transcend national boundaries.

Rights-Protection Weaknesses

Both doctrinal and interview evidence reveal that the present framework insufficiently safeguards individual rights:

Privacy and data protection: Although the Personal Data Protection Act (2022) was enacted, the oversight authority is yet to be operationalised. Consequently, data subjects lack effective remedies for misuse or breaches.

Freedom of expression: The 2019 temporary social-media ban following the Easter attacks exemplified executive overreach without judicial authorisation. Such measures contradict the ICCPR Articles 17 and 19.

Overbroad investigative powers: The Online Safety Act (2024) grants authorities access to personal data and the ability to remove content without a proportionality test or independent review.

Due-process inconsistencies: Notification of investigation, right to appeal, and mechanisms for data erasure are inadequately defined, limiting procedural fairness.

From a governance perspective, these weaknesses erode public trust and threaten Sri Lanka's compliance with its obligations under international human-rights law.

Institutional and Procedural Shortcomings

Stakeholders repeatedly emphasised that institutional fragmentation and limited capacity hinder effective enforcement:

Overlapping mandates: Sri Lanka CERT, the ICT Agency, and law-enforcement divisions operate with minimal coordination or shared protocols.

Resource constraints: Specialised cybercrime units within the CID and CERT lack digital-forensic expertise and technical infrastructure.

Judicial knowledge gap: Judges and prosecutors are seldom trained in digital evidence handling or international cooperation procedures.

Absence of incident-reporting culture: Private and public institutions are not legally required to disclose breaches, resulting in data under-reporting and limited situational awareness.

These issues collectively point to the absence of a national cybersecurity governance framework capable of unifying institutional efforts.

Comparative Insights

Cross-jurisdictional analysis revealed that Sri Lanka lags behind regional and international peers:

Country/ Region	**Key Instruments**	**Distinctive Features**	**Lessons for Sri Lanka**
India	DPDP Act 2023	Consent-based data use; breach reporting	Link privacy with enforcement
Singapore	Cybersecurity Act 2018; PDPA	CII audits; provider licensing	Ensure sectoral compliance
European Union	NIS2; GDPR	Resilience and rights-based rules	Embed rights and risk duties
ASEAN Region	Cybersecurity Strategy 2025	Regional standards alignment	Strengthen cooperation, MLATs

Table 1. Comparative Cyber Law Frameworks and Key Lessons for Sri Lanka

Comparatively, Sri Lanka lacks institutional coherence and harmonised risk-management obligations. Participants stressed that without a unified authority

similar to Singapore's CSA, the country risks remaining reactive rather than strategic.

Empirical Interview Themes

The interviews revealed four recurring themes that humanise the doctrinal findings:

1. Need for rights-based modernisation: Experts agreed that criminalisation alone cannot build public trust; reforms must embed privacy, dignity, and accountability.

2. Institutional fragmentation: Respondents described overlapping leadership among ICTA, CERT, and the Ministry of Justice as a barrier to timely policy action.

3. Judicial and educational gaps: Continuous professional development in digital-forensic science and cyber-law interpretation was widely requested

4. Public-awareness deficit: Citizens remain largely unaware of their legal remedies, reducing deterrence and engagement with digital-rights discourse.

5. These perspectives reflect the socio-legal dimension of cyber governance emphasising that law reform must be accompanied by education and institutional learning.

Synthesis

Across doctrinal and empirical evidence, three converging insights emerge:

1. Legal modernisation requires updated offence definitions, cross-border enforcement mechanisms, and digital-evidence standards consistent with the Budapest Convention.

2. Institutional capacity-building demands a national digital-forensics laboratory, inter-agency coordination framework, and regular judicial training.

3. Rights integration necessitates embedding privacy, proportionality, and transparency principles into investigative and regulatory practice.

Collectively, these findings confirm that Sri Lanka's cybercrime framework remains reactive, executive-driven, and fragmented. Without legislative renewal and institutional reform, digital governance risks becoming a source of rights violations rather than protection. The next section interprets these findings through a policy lens, demonstrating how layered reforms grounded in human rights, institutional capacity, and international alignment can guide Sri Lanka toward resilient and democratically legitimate cyber governance.

Discussion

The findings reveal a decisive need to reinterpret cybercrime law not merely as a technical instrument but as a pillar of democratic governance. The legislative gaps, rights deficiencies, and institutional fragmentation identified in this study illustrate how the absence of coordinated cyber policy undermines both national security and citizens' trust in the state. Within the humanities and social-science perspective, law operates as a social contract that mediates power, participation, and accountability in the digital sphere. Hence, reform must embed human values and ethical governance alongside legal precision.

From Control to Governance

Sri Lanka's cybercrime framework reflects a command-and-control model inherited from early post-colonial legal drafting. Such an approach prioritises state surveillance and enforcement over participatory governance. As Locke's theory of consent underscores, legitimacy derives from public accountability, not coercion. A rights-based cyber law must therefore replace unilateral executive discretion with transparent, consultative mechanisms that engage civil society, academia, and industry. This shift from control to governance would restore the normative balance between security and liberty.

International Norms and Comparative Lessons

Global instruments such as the Budapest Convention, GDPR, and NIS2 Directive provide a normative compass for reform. They link security obligations to privacy, transparency, and proportionality principles that remain weakly embedded in Sri Lanka's current statutes. The European Union's experience demonstrates that cybersecurity resilience can coexist with rights protection when duties of reporting, accountability, and oversight are legally codified. Similarly, India's DPDPA 2023 integrates consent and grievance redress, while Singapore's Cybersecurity Act 2018 enforces sectoral compliance through independent regulation. These examples illustrate that cyber law reform must combine legal precision with institutional maturity and public participation.

Human Rights and Digital Justice

Interview participants repeatedly highlighted the ethical dimension of cyber governance: security cannot be pursued at the expense of dignity and freedom. The absence of effective data-protection enforcement, overbroad investigative powers, and inadequate judicial review jeopardise Sri Lanka's obligations under the International Covenant on Civil and Political Rights (1966). Embedding human-rights clauses within cyber legislation would strengthen legitimacy and global credibility. Rights such as privacy, expression, and access to remedy must be framed as enforceable entitlements, not discretionary benefits.

Institutional Coordination and Capacity

Sustainable cyber governance requires capable, coordinated institutions. The interviews revealed a governance vacuum caused by overlapping agencies CERT, ICTA, and law-enforcement units each operating without shared protocols. Establishing a National Cybersecurity Commission would centralise oversight, streamline reporting, and align national standards with international frameworks. Investment in a certified digital-forensics laboratory, cross-agency data-sharing agreements, and judicial training programmes would enhance investigative efficiency while maintaining due-process safeguards. Such institutional strengthening represents both a capacity-building and a trust-building exercise.

Societal Awareness and Public Engagement

Policy effectiveness ultimately depends on public understanding. Limited legal literacy and digital-rights awareness among citizens perpetuate under-reporting of cyber incidents. A national awareness campaign integrated into school curricula and professional training could empower citizens to recognise cyber risks, report offences, and exercise data-protection rights. Embedding digital citizenship education within the broader civic-education agenda would transform cyber law from an elite legal domain into a participatory governance tool.

Towards Adaptive Governance

Finally, reform must be conceived as an adaptive process responsive to technological change. Fixed statutory definitions risk obsolescence; hence, a Triennial Cyber Law Review Cycle is proposed to evaluate emerging risks such as quantum computing, artificial intelligence, and deepfake manipulation. Continuous policy review, informed by academic research and public consultation, would ensure flexibility while upholding legal certainty. This adaptive model positions Sri Lanka to anticipate, rather than merely react to, future threats.

Overall, the discussion situates cybercrime law within the continuum of governance, rights, and accountability. Legislative reform without institutional and cultural transformation would merely reproduce existing weaknesses. Conversely, a layered approach linking legal modernisation, institutional development, and civic participation can embed digital resilience within democratic practice. Cyber law thus becomes not only a defence mechanism but a framework for inclusive, transparent, and rights-centred governance suited to the digital age.

Reform Framework

Translating analysis into actionable reform requires a multi-layered approach that strengthens institutions, aligns legislation with international standards, and restores public confidence in digital governance. This study proposes a four-layered rights-based framework designed to guide ms with adaptive governance illustrated in Figure1.

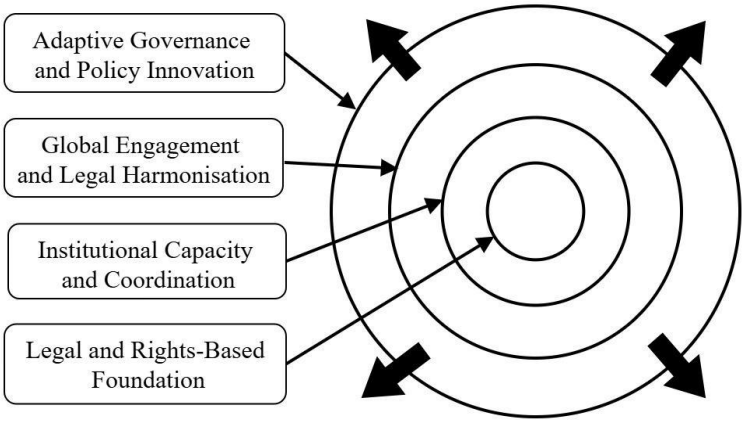

Fig.1. Proposed cybersecurity law reform framework.

Layer 1: Legal and Rights-Based Foundation

Legislative renewal must begin by redefining offences and embedding rights protections. Amendments to the Computer Crimes Act (2007) should include explicit provisions for AI-enabled crime, crypto-currency abuse, and supply-chain attacks. Simultaneously, full implementation of the Personal Data Protection Act (2022) is essential to guarantee privacy, transparency, and accountability. A constitutional clause affirming digital rights covering privacy, due process, and freedom of expression would anchor reforms within democratic legitimacy. All new laws should undergo human-rights impact assessments prior to enactment.

Layer 2: Institutional Capacity and Coordination

Sri Lanka needs a unified structure for cyber governance. Establishing a National Cybersecurity Commission (NCC) under the Ministry of Justice could consolidate existing agencies such as CERT, ICTA, and law-enforcement cyber units. The NCC should oversee a National Digital Forensics Laboratory, responsible for certification, evidence handling, and expert training. Judges, prosecutors, and investigators must undergo continuous professional education on digital-evidence management and cross-border legal processes. Inter-agency coordination protocols using MITRE ATT&CK, ISO 27001, and STRIDE standards will enable coherent policy implementation and accountability.

Layer 3: Global Engagement and Legal Harmonisation

International collaboration remains a cornerstone of modern cyber law. Sri Lanka should operationalise its obligations under the Budapest Convention (2001) by finalising Mutual Legal Assistance Treaties (MLATs) and participating in joint investigations through INTERPOL. Adopting core elements of the EU NIS2 Directive (2023) such as breach notification, supply-chain security, and minimum resilience standards will facilitate alignment with global partners. Active involvement in the ASEAN Cybersecurity Cooperation Strategy (2025) and other regional frameworks will enhance interoperability and trust in cross-border data flows.

Layer 4: Adaptive Governance and Policy Innovation

Cyber law must evolve with technological progress. A Triennial Cyber Law Review Cycle should be institutionalised to evaluate new risks arising from quantum computing, deepfakes, and emerging AI models. Public consultations involving academia, industry, and civil-society organisations should precede every major amendment. Establishing a Cyber Law Research and Training Centre at university level can support continuous policy learning and evidence-based law-making. Periodic publication of a national Cybersecurity White Paper would ensure transparency and stimulate informed public debate.

Implementation Timeline

Timeframe	Key Actions
Short-term (0 – 12 months)	Amend Computer Crimes Act (2007) to include AI and cryptocurrency offences; activate the Data Protection Authority; establish a National Digital Forensics Laboratory.
Medium-term (1 – 3 years)	Form a National Cybersecurity Commission; launch mandatory breach-notification rules; train judiciary and law enforcement; develop a Critical Infrastructure Protection Framework.

Long-term (3 – 5 years)	Ratify Mutual Legal Assistance Treaties (MLATs); embed surveillance oversight mechanisms in primary legislation; operate a Cyber Law Research Centre; publish an annual National Cyber Governance Review.

Policy Rationale

This four-layered model balances security, rights, and innovation. It positions Sri Lanka within global cybersecurity discourse while preserving constitutional guarantees of liberty and privacy. The framework encourages evidence-based policymaking and participatory reform, positioning the nation as a regional exemplar of rights-centred digital governance.

Conclusion

Sri Lanka's existing cybercrime framework, centred on the Computer Crimes Act (2007), no longer reflects the realities of a digitised society. The research demonstrates that outdated definitions, weak procedural safeguards, and fragmented institutions have limited the country's ability to prevent, investigate, and prosecute cyber-offences while upholding citizens' rights. Without coordinated reform, digital governance risks eroding public trust and hindering participation in the global digital economy.

This study advances a four-layered reform model that integrates human-rights protection, institutional coordination, international harmonisation, and adaptive governance. Modernising legislation, enforcing the Personal Data Protection Act (2022), and establishing a National Cybersecurity Commission would enhance accountability and capacity. Incorporating international standards such as the Budapest Convention and NIS2 Directive ensures interoperability and cross-border cooperation. Equally important is embedding ethical oversight, judicial training, and digital-rights literacy to create a culture of informed participation. The findings underscore that cybercrime law reform is not solely a technical or legal necessity; it is a constitutional and moral responsibility to safeguard liberty, dignity, and the rule of law. By aligning national legislation with democratic principles and global norms, Sri Lanka can position itself as a regional leader in rights-based digital governance. Implementing this framework will enable a secure, transparent, and inclusive digital future that strengthens both state resilience and citizen empowerment.

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Appendices

Appendix A – Abbreviations

AI	Artificial Intelligence
CCA	Computer Crimes Act
CERT	Computer Emergency Readiness Team
GDPR	General Data Protection Regulation
MLAT	Mutual Legal Assistance Treaty
NIS2	Network and Information Systems Directive
PDPA	Personal Data Protection Act
OSA	Online Safety Act
ICTA	Information and Communication Technology Agency
NCC	National Cybersecurity Commission
STRIDE	Spoofing, Tampering, Repudiation, Information Disclosure, Denial of Service, Elevation of Privilege

Appendix B – Summary of Key Informant Insights

Stakeholder Group	Key Observations
Judiciary	Lack of judicial training in digital evidence handling and international cooperation.
Law Enforcement	Limited forensic tools and overlapping authority among investigative units.
Legal Practitioners	Absence of clear procedural safeguards for privacy and due process.
Academia	Need for integration of digital rights and ethics in legal education.
Policymakers	Urgent need to harmonise domestic laws with Budapest Convention and NIS2.

Appendix C – Layered Reform Framework Summary

Layer	Core Focus	Key Measures
1	Legal and Rights-Based Foundation	Amend CCA; operationalise PDPA; constitutional digital rights clause.
2	Institutional Capacity and Coordination	Establish NCC; train judiciary; build national digital forensics lab.
3	Global Engagement and Harmonisation	Ratify MLATs; adopt NIS2-equivalent obligations; join ASEAN cooperation.
4	Adaptive Governance	Triennial review; Cyber Law Research Centre; annual cybersecurity white paper.

Agency Problem in the unregulated Private Higher Education

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Abstract

This paper interprets the Agency problem prevailing in the unregulated private higher education institutions in the perspective of international student recruitment and transnational education. A purposive judgmental sample of multiple cases selected from 120 initial sample of local agents, through open ended semi-structured interviews. Social Cognitive theory, Theory of Planned Behavior along with the Agency theory triangulated to derive at a holistic interpretation. Findings revealed that Agency problem can be broadly interpreted in the context of international student recruitment and transnational education as an act of intentional misrepresentation, intentional misinformation and intentional misconduct beyond the intentions of the principal university.

Keywords: Agency Problem, International Student Recruitment, Case Study, Transnational Education.

Introduction

Higher education has faced many challenges in its long history, such as the transition towards neoliberalism at the dawn of the twenty-first century (De Wit et al., 2025). Agency problem is one of those issues cropped up with neoliberal global capitalism. Higher education is still a truly global endeavor, with over 250 million students enrolled in more than 22,000 universities worldwide. However, we have witnessed more public sector privatization and the growth of private postsecondary education, including online education, due to declining public financing and sustained demand. This will create more ethical and quality problems (De Wit et al., 2025). According to Kadirgamar (2017). Sri Lanka was the first nation in South Asia to "open up" its economy. The movement's social and economic function changed to an ambivalent one in Sri Lanka's economy in 1977 (Jayawardena & Samarasinghe, 2024).The solution to the problems plaguing the nation's HE system has been found to be

the creation of market-driven non-state and state institutions of higher learning (Abeyratne & Lekamge, 2012; Pitigala-Arachchi, 2012). Amidst this backdrop, this paper discusses the agency problem (AP) prevailing in the international student recruitment (ISR) and transnational education (TNE), in the unregulated private higher education institutes (PHEIs) in Sri Lanka from the perspectives of Agency Theory (AT). The Agency theory (AT) traditionally explains the contractual relationships (Ross, 1973; Jensen & Meckling, 1976; Eisenhardt, 1989a) and is applied in the international student recruitment (ISR) (Huang et al., 2014; Nikula & Kivisto, 2020a). The traditional principal agency contracts involve two individuals with actions affecting both parties (Berle & Means, 1932). Later, multiple agency theory (MAT) added complexity to these relationships (Holmström, 1979). These private HE Institutes (PHEIs) established branch campuses locally or operated as designated centers of foreign universities (British Council, 2024a). Higher education (HE) has a cross-border element that can be traced back to medieval times (Kim, 2024). According to UNESCO (2022), there were more than six million international students in 2019, up from approximately two million in 2000 (Inouye et al., 2022). About ⅓ of enrolment to HE worldwide is estimated to be in PHEIs (UNESCO, 2022).

Majority of prior research on Agency Theory has addressed AP in governance issues in the perspective of PFU and agents to mitigate AP in Western countries (Huang et al., 2014; Nikula & Kivisto, 2020b) though South Asia is the region with the strongest presence of non-state actors in education (ADB, 2011; UNESCO,2022). The central issue addressed here is the lack of broader interpretation and attention on AP between local agents and the principal foreign universities (PFU). According to extant literature, the AP arises due to conflicting interests, information asymmetry, moral hazards, adverse selection, and goal conflicts (Jensen & Meckling, 1976; Eisenhardt, 1989a; Kivisto, 2005; 2008). It is estimated that there are about 10,000-20000 education agents operating worldwide (BEG, 2016). However, absence of regulations is visible in the PHE with no clarity in objectives and no best practices in governance, which naturally raise concerns about the standards of programs offered with much ambiguity, inconsistency and poor quality (IPS, 2023; UNESCO, 2022).

Methodology

Within qualitative methodology this research was grounded in the constructivism and case study strategy with theoretical triangulation. A purposive judgmental sample of 120 local agents were deployed via open ended interviews semi structured, self-administered with much care on anonymity of data. All data were thematically analyzed (within case and cross case analysis) (Braun & Clerk,2006). All thematic outcomes finally mapped with the theoretical framework to achieve higher order categorization. Coding strategy deployed was Descriptive, In vivo, Priori and Process coding (Saldana,2013).

Originality of this research lies on the unique approach on interpreting the AP in the local context of ISR in the unregulated PHEIs. Due to aforementioned gaps in the interpretation of AP according to the present context, this research emphasized on "intention of agents" rather than the prior research on AP in ISR in higher education. Therefore, using Social Cognitive Theory (SCT) (Bandura,1986;1999;2001;2006), Theory of Planned Behavior (TPB)(Ajzen,1991;2006) in line with the assumptions of AT to serve the purpose of this research, AP interpreted through theoretical triangulation(Hoque,2013), amidst lapses of regulation and tension between internal interests and compulsion for local recognition" arise to attract students locally (Maslow,1943;Zhang et al., 2018) according to the status quo of private higher education (PHE) as mentioned in the **(Fig.1).**

Triangulation was deployed as it validates, challenges, extend, and enhance confidence of the findings (Ediyanto, Zulkipli, Sunandar & Yunus, 2025). Therefore, empirically multiple case study was deployed to facilitate the interpretation of AP in the local and sub agent perspective as engaged in ISR and TNE in the unregulated private higher education (PHE). Following five multiple cases (Stake,2006; Yin,2017) transcribed via written notes with informed consent with multiple intervals from 2017-2022. An observer role was maintained while interviewing during the multiple case study (Creswell,2013). Ethical approval was obtained from Ethics Review Committee of Humanities and Social Sciences of University of Sri Jayewardenepura, Sri Lanka for this research:

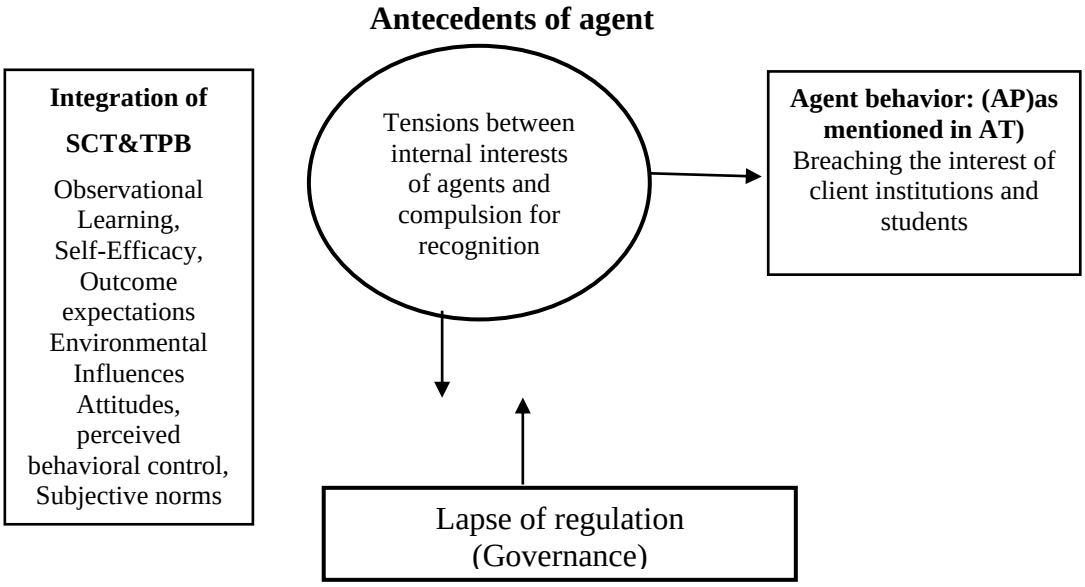

Fig. 1: Theoretical framework**.** *Source*: (Ajzen, 1991; Bandura, 986;2001;2006)

Case A1: A Case pertinent to forged degree certificates and degrees offered to students having misrepresented the University A.

Case B2: A higher education Institute C published as an Institute offering, "Government approved degree certificates".

Case C3: Honorary Doctoral Degree in Public Administration offered to a local applicant from a university not accredited by the National Body in the respective country and not listed in the World Higher Education Database (International Association of Universities), submitted to local government appointments.

Case D4: Higher Education Institute being restricted its operations by the Higher Education Commission of another country operates in local context issuing fake degrees by violating their charter.

Case E5: Using Foreign University name which do not allow to operate distance education, transnational education, any offshore degree programs.

Based on literature reviewed and data collected three selection criteria of multiple cases was decided in order to explore empirically how unethical practices committed by unregulated PHEIs: These include

1) lack of proper liaison with the principal university (Huang et.al., 2014),
2) Lack of authorization: Intention to perform without proper authorization (Chang, 2013; Ajzen,1991; Bandura, 2001; Bandura, 2006),
3) Lack of Sustainability: Period of continuity in operations with the principal university (British Council, 2024c).

Case A1: Forged Degree certificates and degrees offered to students misrepresenting the University A

A Government Authority in Sri Lanka has received a complaint from the Special Criminal Investigation Division of Sri Lanka Police that sixty-seven (67) students were given the fake degree certificate for USD 500 after completion of a Master of Education degree at Campus A which belongs to an Agent in Sri Lanka who signed an agreement with Agent 2 from the Institute B in India. When one of the managers was interviewed pertaining to the matter, he said that: "Private institutes cannot survive in this HE business unless we compete and motivate students by any means at any cost to get into our university. Finally, it is on our hands to run the game."

Later at one stage, Vice President of University A addressed the Sri Lankan Ambassador of Thailand, the country where University A is located and stated that the University A has not issued any Degree certificate and had not enrolled any students from Campus A which belongs to Agent 1 who has entered to an agreement with a sub agent in India and not with the main University A.

Further, on 10th May 2021, Vice Rector of the University A acting on behalf of the Rector addressed the Rector of Institute B in India and Agent 1 of Campus A in Sri Lanka and has mentioned that in order to formally partner, an MOU and a Memorandum of Agreement (MOA) must be signed outlining proper implementation protocols and as outlined in Section 3.1 of the MOU, all programs and activities must be implemented under the terms of the MOU

and shall be mutually agreed upon in writing. To this day, the main University A and Institute B in India has not signed a MOU.

Campus A issued falsified certificates and degrees in many different ways: It was mentioned clearly when both the rectors of Campus A and Institute B were at the University A that students who have already enrolled in Campus A, before the MOU was signed cannot be accepted to the University A. Campus A in several occasions has attempted to enroll students prior to signing of MOU to the University A without permission.

University A has discussed that they will deny the admission of future students who wanted to major in Bachelor of Arts (BA) and Masters of Arts (MA) in English degrees because they do not have those degree programs. Campus A has falsely issued the BA and MA in English degree certificates as well as many other degree certificates to the students under the name of University A.

The Master of Education program at the University A has not enrolled any student from Campus A because it has reached enrolment capacity. However, Campus A has enrolled students to the University A program without its knowledge.

University A has received many complaints from students regarding the authenticity of certificates and degrees. Main university has requested the campus A several times for clarification but the Agent 1 was dishonest, claiming they did not issue certificates and degrees to students. The university A has proof and received evidence of a falsified degree certificate issued by campus A from a graduate of Campus A.

To the date of 10th May 2021, the main university has not received and charged any fee from students of campus A, and has stated that it will not accept any fee due to illegal behavior of Agent 1.

Further, the university A demanded action on the following:

1. University A never registered or issued certificates or degrees to students of campus A. Therefore, all certificates or degrees from past to present that students received were fake.
2. University A shall not assume or ever have any liability or responsibility for Institute B in India and Campus A due to fraudulent activity.
3. University A has launched a legal complaint to the police in the respective country and the embassy of that country in Sri Lanka for

fake documentation. These have been forwarded for investigation due to the nature of international scam.

4. Defamatory behavior of Campus A has ruined the reputation of the University A by issuing falsified degrees, which lowers its quality standards.
5. Campus A must recall the certificates and degrees they have issued to students under the name of the University A.
6. Since, the University A and the Institute B are no longer partnering, Institute B and all its partners, including campus A and are not allowed to promote any programs from the University A. Institute B and Campus A must remove all mentions of the University A which includes, but is not limited to all text, graphics, logos, photos, designs, trademarks, artworks, media, videos, websites. flyers, banners, brochures with effect from 10th May 2021.

Vice President of University A addressed the Sri Lankan Ambassador in Thailand, the country where University A is located having gone through the MOU sent by the Sri Lankan mission, and stated that they never let any institution to sublicense the MOU to this day of 4th June 2021, and University A and Agent 2 in India have not signed the MOU. It was clearly mentioned that both rectors of Institute B belonging to Agent 2 and Campus A belonging to Agent 1 were in Thailand at one instance and those 67 students who had already enrolled in Campus A before the MOU was signed and cannot be accepted at University A. Campus A has on several occasions attempted to enroll pre-MOU students to University A without permission and it is against the rules and conditions of the Thailand Ministry of Higher Education.

The Ambassador, of the Embassy of the Democratic Socialist Republic of Sri Lanka in Thailand by his email dated 15th July 2021 has informed that they have received the self-explanatory letter via email from the Rector of the Campus A, Sri Lanka, informing that students completed the degree courses at his Campus have not offered the graduate certificates by the University A, Thailand, and requested to facilitate his request.

Some of the facts brought to Ambassador's attention by the University A are as follows:

1. University A has never entered into a MOU with Campus A and they have entered into an agreement with Institute B, India.

2. Campus A has issued graduate certificates without the knowledge of University A and the certificates are brought to their attention by some of the degree holders for verification.
3. Upon receipt of such queries for verification, University A has consulted the Embassy of Thailand in Colombo. The copy of a note issued by the Thai Embassy in Colombo advising University A, Thailand to consult a lawyer for legal proceedings was also handed over.

Further, the Embassy also pointed out that "forged" certificates have also been produced for attestation by the Government authorities in Sri Lanka. Government Authority in Sri Lanka does not involve in attestation of any foreign university certificates. However, in terms of the provisions of the Public Administration Circular No. 16/92 dated 13 March 1992, the respective Government Authority recognizes the universities listed in the following international publications, which are authentic sources of information on Universities and HEIs in different countries of the world:

1. Commonwealth Universities Yearbook,
2. International Handbook of Universities.

University A, in Thailand is a university listed in the International Handbook of Universities published by the International Association of Universities as at 16th May 2022 as inquired by Campus A. However, authenticity of the degree certificates need to be verified by the University A. At the time of the verification process by one of the informants, the case was brought to the notice that University A. The University A was unaware about the situation and has not issued such degree certificates. Campus A frequently requested Government Authority to issue a letter on behalf of them as they are facing a difficult situation. However, the Government authority in Sri Lanka stated that they are not in position to be involved in non-state matters as such matters are not within the purview of the Universities Act No. 16 of 1978.

Private HEIs Breaching the Interests of Students

There were two cases where the interests of students were breached. This private HEI with the intention of attracting the desired student cohort used their letterheads and paper advertisements even before checking their recognition and taking any proper authorization from the principal university. The students in the in remote areas of the Eastern and Northern provinces of

Sri Lanka are not aware about the recognition or the authorization. This private HEI used to be a family business and their predecessors used to engage in this business as long as students are not aware about the recognition of universities and their authorization. These private HEIs used to obtain letters as designated centers of the principal university via a sub agent. However, authenticity of these activities or designated centers and agents were not explored by anybody in Sri Lanka and unresearched.

Case B2: Institute C: Published as an Institute Offering "government Approved Degree Certificates"

Advertisements were published by private HEIs even without checking the listing of the Universities in the Commonwealth Universities Yearbook and International Handbook of Universities. It was observed that the MOU between the principal University and the Institute C, letterheads of the Institute C, located in Jaffna carried wordings **"**UGC approved degree certificates.

Social acceptance of the Government organizations has been misused in advertising the programs by the Institute C to have acceptance in the society as well as to attract a large student population. They have published in Tamil newspapers and issued brochures. They are very much aware that there are no strict regulations in Sri Lanka as there is no presence of proper agent networks for countries other than Canada, New Zealand, UK, USA, Australia, and Finland.

When one of the senior managers of the said institute interviewed, he said that the recognition is immaterial to them as long as the HE business is profitable, their father used to do this business and they did not want company registration as they will come and check.

However, they used to keep contact with Sri Lankan embassy with few known people to help with their business and those people are also Tamil officers.

Case D4: HEI whose operations are restricted by the Higher Education Commission of another country operates in Sri Lanka issuing fake degrees by violating their charter

HEI C, whose operations have been restricted by the Higher Education Commission of a foreign country and many other countries, operates in Sri Lanka as an affiliated institute of a foreign university according to their charter signed on 10th January 2000. This HEI has violated its charter with the Foreign

University, offered fake degrees using newspaper advertisement and designed a fake letter said to have been issued in 1991 by the Government Authority indicating that it conducts graduate and postgraduate courses with the full approval of the Sri Lankan Government Authority and further requested recognition as a recognized institute from the relevant Government Authority in Sri Lanka. However, the Government Authority rejected the claims and request made in August 2019 as they have been declared in foreign countries in the list of illegal/ fake universities and campuses. This HEI C is neither listed in the International Handbook of Universities nor requested any degree granting powers from the Ministry of Education in Sri Lanka. It had operated within Sri Lanka and foreign countries for many years offering fake degrees charging huge sum of money from students. Parties representing this HEI C have met the authorities and explained the matter; however, they have failed to obtain the recognition and the Government Authority has informed the relevant Higher Education Commission in the foreign country that the letter issued is a fake. Further, even in the absence of proper authority they functioned as a designated center of the university and said to have appointed by a sub agent where authenticity was not explored by anybody and not even by the students. Students were given fake promises of offering allied health degrees even without proper teaching hospital training. This is also not registered under the Registrar of Companies.

Private HEIs Breaching the Interests of Principal University

Generally, agents engage in unethical practices by misrepresenting the principal university without authority to perform their operations (Nikula & Kivisto, 2020). This leads to limited transparency in their activities. Such instances intend to provide more profiteering opportunities for agents breaching the interests of the principal university.

Case C3: Honorary Doctoral Degree in Public Administration offered to a Sri Lankan from a University not accredited by the National Body in the UK and not listed in the WHED

Procurement Officer of a Local Government authority in Sri Lanka verified the recognition of the University B from the Government Authority of Sri Lanka on 8th September 2021 as the respective candidate has submitted documents along with a Doctoral Degree certificate obtained from University

B in the UK, for employment in a key position. After checking it was verified that the University B is not listed either in Commonwealth Universities Yearbook or in the International Handbook of Universities as at 29th September 2021. The matter was further verified via email dated 30th September 2021 from the information and publication officer of the International Association of Universities. By the email dated 30th September 2021, the said officer stated that "This is not a university accredited by the national body in the UK even and it is not listed in the WHED". This was finally conveyed to the relevant Local Government authority.

The case revealed that having gone through the credentials of the said candidate and in recognition of his achievements in the field of Road Development, the Academic Council of the said University B has offered an Honorary Doctoral degree in public administration and the graduation took place in Dubai on 19th June 2019.

The Marketing Manager of the institute, who supposed to be the agent of the University B later said that their CEO was doing business for nearly ten years and this academic activity was running for three years. He further said that they offer their own credentials and maintain good relations with the University B and therefore no one will come for academic audit. However, they failed to submit any evidence for a MOU or an agreement signed with the university B.

Further conversation with the Senior Manager of the institute revealed that they produce attractive brochures but have not obtained proper authorization at least through a sub agent and was running the institute within their allied business, with close academia where they have been supported with a good sum of remuneration. They have conducted their convocation in Dubai as it is beyond the vicinity. All attempts were made without proper authority; however, much favoritism was engaged.

Case E5: Using the name of a foreign university name which does not conduct distance education, transnational education, or offshore degree programs

Degree holder of a foreign university said to have affiliation with a leading non-state HEI in Sri Lanka, has verified the authenticity of the degree from that university as the confirmation was needed to inform the employer. Most of the Sri Lankan Private and Government sector employers need verification

from the foreign university at the time of recruitments. When verified from the Foreign University The relevant candidate received the following response on 8th February 2021:

> "Please be informed that based on our records, as well upon verification with the Office of Programs and Standards Development of the Commission on Higher education (CHED), said university located in a foreign country has no authority to operate distance education and transnational education or any offshore degree program offering. As such, it is not allowed to accept foreign students not staying in that country. Further, we have already written to said non-state Institute regarding this alleged offshore program or distance education offering so the concerned institute can shed light on the matter."

On 22nd February 2021, the President of the University has sent the following communication when inquired about this incidence:

> "We regret to inform that the relevant candidate does not appear in the list of enrolled students of the said foreign university. Further, the foreign university does not offer Doctor of Business Administration, and we do not recognize the said transcript of records and the said photograph has not taken at our campus. While our programs are duly recognized and accredited in the said foreign country, we are sorry that said foreign university has been used by persons and organizations without any authority and agreement or contract from the said university and persons whose identities are unknown to us".

This agent, a senior manager of a private HEI, has issued credentials without the authority of the principal university and was warned of this activity several times. Copy of the credential was probed and it was found that there was no proper document authorizing their establishment. However, in the local context operations were not disturbed in the Eastern province as they are aware that no regulation is present in this regard in Sri Lanka.

Even the Registrar of Companies was unable to give a list of private HEIs in order to probe into certain matters with regard to such incidences.

Quotes mentioned in the multiple case study are pivotal because they show subjectivity of the human experience in qualitative data indicating different perspectives and intentions behind committing unethical practices in

the unregulated non-state HE sectors. These quotes highlight the broader view behind the intensions of committing unethical practices leading to AP and other individual, generational and environmental factors leading to committing an unethical act.

These cases were classified into two main categories, i.e., breaching the interests of students and breaching the interests of PFU. The chosen theories integrated such as SCT and TPB and AT also suggest the significance of intention to perform the private HE sectors with proper authorization. This highlights the importance of "intentionality" as majority have profiteering targets without obtaining proper authorization, which enhances committing more unethical practices and the significance of principal and agent relationship. The codebook organized priori codes theoretically derived from SCT and TPB into categories aligned with first cycle coding (Descriptive, In Vivo, Process) and second cycle coding (Axial) (Saldana,2013).In order to interpret the AP more holistically, second cycle themes have been organized into three intentional categories: Intentional Misrepresentation, Intentional Misinformation, and Intentional Misconduct. These categories in (Table 1) reflect the agent's deliberate departure from ethical and contractual expectations. This categorization built a meaningful bridge between the thematic outcomes and AT while being grounded in the SCT and TPB framework (Ajzen, 1991; Bandura, 2001; 2006):

Authenticity of this research was ensured based on constructivism by ensuring authenticity criteria such as fairness, ontological authenticity, educative authenticity, catalytic authenticity (Guba & Lincoln, 1994).

Findings

Findings of this thematic exercise along with multiple case study reveals AP as an act of intentional misrepresentation, intentional misinformation coupled with intentional misconduct beyond the intentions of PFU. This is a broader interpretation than the present interpretation of AP in the extant literature based on intentional constructs, theoretically triangulated. While some governance mechanisms for AP have long been advocated within western context, very little attention has been paid to their effective implementation in emerging economies in South Asian countries operating Private HEIs such as in Sri Lanka. Broader interpretation of AP reveals in this paper in terms of an individual or organization-wide intentionality, driven by

environmental determinants, internal drives and dispositions of self or organizational actors to commit a conflicting act beyond the intentions of the principal and contributes to the current literature on AP.

Second Cycle Theme	Intentional Category	Justification
Fraud Normalization	Intentional misrepresentation	Fraud becomes normalized as agents intentionally misrepresent standards, affiliations, or approvals.
Observed behavioural patterns	Observed behavioural patterns	Observed behavioural patterns
Motivated by market demand	Motivated by market demand	Motivated by market demand
Learning via trust networks	Learning via trust networks	Learning via trust networks
Ethical justification patterns	Ethical justification patterns	Ethical justification patterns
External enablers of fraud	External enablers of fraud	External enablers of fraud
Social facilitation of fraud	Social facilitation of fraud.	Social facilitation of fraud
Evasion confidence, regulatory blindness	Intentional misconduct	Belief in being able to evade accountability demonstrates calculated defiance of rules.
Control over compliance risks	Intentional misconduct	High perceived control over unethical actions reflects purposeful engagement.
Normative market behavior	Normative market behavior.	Normative Market behavior
Social pressure to conform	Intentional misinformation	Peer influence reinforces misinforming behaviors under the guise of conformity.
Attitude toward legitimacy	Intentional misrepresentation	Downplaying accreditation indicates willful misrepresentation of program status.

Informal operational control	Intentional misconduct	Circumventing formal agreements (e.g., late MOUs) is a strategic breach of trust.
Unregulated access to certification	Intentional misconduct	Having the tools and intent to issue unverified degrees reflects direct policy violation.

Table 1: Second cycle themes organized into three intentional categories: Intentional misrepresentation, Intentional misinformation, and Intentional misconduct.
Source: Author Compilation (2025)

Conclusion

It can be concluded that, by combining with-in case analysis, cross - case analysis and theoretical triangulation using SCT and TPB, addressed significant lapses in the AT, offering a more holistic understanding of AP in the perspective of ISR and TNE in HE. This integrated approach extended AT by incorporating behavioral, social and environmental factors, further enhancing theoretical rigor by linking internal and external drivers of fraudulent behaviour. It can also be concluded that having proper authority in performing contractual relations with the principal foreign university through proper agent networks without intending to engage in unethical practices is of utmost importance to attract relevant student. Unregulated private HEIs should appropriately liaise with principal foreign university and maintain a strong mutual understating along with healthy business relationships with stakeholders of HEI, even in the absence of proper business contacts or relations. In addition, it can be concluded that having sustainability in HE business operations is very important as it largely impacts the stakeholders to maintain the loyalty and trustworthiness.

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Preserving the Historical Field Recordings of C. de S. Kulatillake

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Abstract
Cyril de Silva Kulatillake was a pioneering Sri Lankan ethnomusicologist. In the late 1970s and early 1980s, he embarked on a journey to document Sri Lankan music using reel-to-reel audio tapes, travelling to numerous villages. This paper concerns the restoration and preservation of a part of the Kulatillake field recordings. The study restored the open reel tape recordings and carefully digitized the soundtracks. Each tape was meticulously examined and cleaned; and the tape containers and accompanying notes were documented and photographed. Once digitized, the recordings, which represent various ethnic groups in Sri Lanka, were catalogued. The collection captures a rich tapestry of Sinhala and Tamil songs, Portuguese Burghers' *baila* songs and Veddas' ancestral tunes, offering a soundscape of Sri Lanka's immaterial cultural heritage.

Keywords: C. de S. Kulatillake; ethnomusicologist; historical field recording; audio preservation; Sri Lankan music

Introduction
This paper concerns the field recordings of Cyril de Silva Kulatillake (1926–2005), who is usually referred to as C. de S. Kulatillake (Figure 1). His vision for preservation of folk music and traditional music, his philosophy and methodology for field recordings are invaluable resources for Sri Lanka's musical heritage. The objective of this paper is to document the process of restoring, digitising, and cataloging several tapes that were donated to the University of the Visual and Performing Arts by one of Kulatillake's colleagues. The article begins with biographical information on Kulatillake and his philosophy on ethnomusicology. The restoration and digitisation process is then outlined, and the contents of the collection are discussed.

Biography of Kulatillake

Kulatillake was born in the southern coastal town of Ambalangoda, where he received his formal education at the Ambalangoda Dharmashoka Vidyalaya. Sri Lanka was a British colonial subject until 1948, and as was typical for the time, the language of instruction was English. He began his career as an English instructor in the Teldeniya Maha Vidyalaya in the central hills near Kandy. His music education began overseas in 1952 at Visva Bharati in Santiniketan, West Bengal, India, where he learned to play *tabla*, *sitar* and *esraj* (Samarasinghe, 2023, p. 40). Santiniketan was a residential school established in 1921 by the Indian polymath Rabindranath Tagore (1861–1941), who sowed the seeds for reviving national heritage repressed under colonialism.

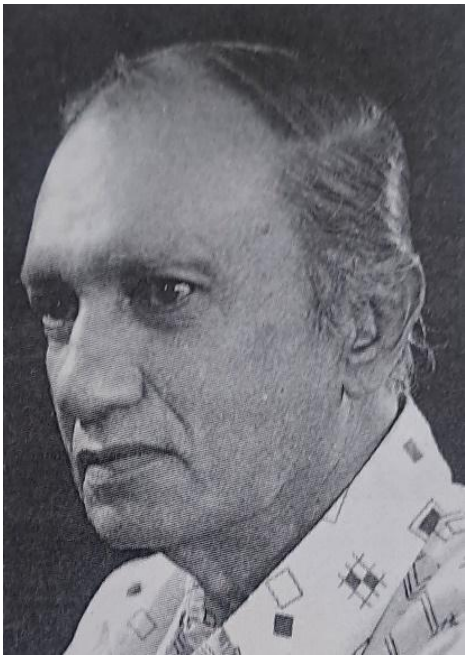

Fig. 1: C. de S. Kulatillake

Kulatillake specialized in *sitar, esraj* and *Tabla* at Vishava Bharati University from 1952–1956, and then served as a music instructor at the Teacher Training College in Mirigama, Sri Lanka. During this period, he came into contact with William Banda Makulloluwa (1922–1984), a 'reform-minded theorist' and 'cultural nationalist' (Peiris, 2017, p. 18) in the field of Sri Lankan music, whose position within the power structure enabled him to initiate institutional

change. Makulloluwa appointed Kulatillake to important public bodies including the Folk Music Panel of the Arts Council. Both Makulloluwa and Kulatillake were interested in marginalized forms of folk music in Sri Lanka. Makulloluwa introduced the study of diverse forms of folk music to the school curriculum and also organised regular workshops for teachers (Wijewardena, 1994, p. 62). Makulloluwa's appointment as the Chief Inspector of Music (1953–1956) coincided with the rise of a populist Sinhalese ethno-nationalist government (Peiris, 2017, p. 21; Reed, 2011, pp. 135–136). At the time, the traditional music of the Sinhalese, the largest ethnic group in Sri Lanka, had the endorsement of the establishment which favoured a homogenous culture, and that continued after independence. Kulatillake worked for the Music Research Unit at the Sri Lanka Broadcasting Corporation (then known as the Ceylon Broadcasting Corporation) and became its head in 1970, a position from which he retired in 1986 after 16 years of service. During his retirement, Kulatillake delivered guest lectures at the Institute of Aesthetic Studies (IAS), University of Kelaniya in 1990 and continued to serve until his death.[1]

C. de S. Kulatillake's study visits to Germany, Norway and the Netherlands inspired his approaches to archiving music. During his period of service at the Sri Lanka Broadcasting Corporation (SLBC), Kulatillake met Josef Kuckertz, a German ethnomusicologist, which led to a study trip at the University of Cologne. Kulatillake visited the Freiburg Germany Folk Music Archives and the Tropenmuseum in Amsterdam, where he learned to play *gamelan* music from Sri Superdjan of Java (Kulatillake, 1992). A publication entitled *Kolam – The Masked Play* (Kulatillake, no date), a recording and commentary including photographs resulted from the collaboration between Kuckertz and Kulatillake, A collaborative project between the University of Oslo and the IAS introduced Kulatillake to Kjell Skyllstad, a Norwegian ethnomusicologist. Kulatillake was invited to deliver lectures at the Department of Music and Theatre, University of Oslo. In addition to field recordings, Kulatillake's legacy includes books and booklets, written in both Sinhala and English, which began in 1962 with his first publication, *Kramawath Esraj Vadanaya* (*Orderly performance of Esraj*) (Kulatillake, 1962).

[1] The IAS is now an independent state university called the University of the Visual and Performing Arts (UVPA) in Colombo.

During Kulatillake's travels throughout Sri Lanka, he meticulously collected music and conducted research. In 1970, Kulatillake employed a Tandberg (mono) tape recorder for his initial field recordings. He transitioned to using an Uher 1400 machine in 1974. **Fig.2 and 3** depict tape recorders that Kulatillake used later in the 1980s. The two recorders are the same brands as those he used in the previous decade, but the Uher 160 is a later stereo portable cassette recorder. Both machines pictured are stored at the C. de S. Kulatillake Research and Archival Centre at the UVPA, Colombo and are not in working order.

Fig.2: Tandberg series 11 recorder used by C. de S. Kulatillake
Photography: Kamani Samarasinghe.

Fig.3: Uher CR 160 recorder used by C. de S. Kulatillake
Photograph: Kamani Samarasinghe.

Kulatillake's ethnomusicological philosophy

Folk music concerns the music of the people, often passed down through generations within communities. It is characterized by oral transmission, and lyrics that reflect the everyday life, social customs, and cultural practices (Makuloluwa, 2000; Nettl, 1989). Traditional music in Sri Lanka is observed as formalised and structured, evolving from folk music but closely linked to recognised cultural and religious practices and distinct from folk music.

Traditional music in Sri Lanka encompasses Kandyan Dance Music, Low Country Ruhuna Dance Music, Sabaragamuwa Dance Music and instruments such as the *geta beraya* (barrel drum) from Kandyan Dance Music, *yak beraya* (low country drum) from Low Country Ruhuna Dance and the *davla* (a two headed barrel drum played with a stick on one hand and by the hand on the other) from Sabaragamuwa Dance Music deeply rooted in the country's cultural and religious heritage. Kandyan dance music is popular and native to the area called Kandy of the Central hills' region in Sri Lanka. Low Country Dance Music is popular in coastal areas of the Western and Southern Provinces. Sabaragamuwa Dance Music is popular in Kegalle, Ratnapura, Kalawana, Balangoda and Badulla divisions.

Religion holds a central position in Sri Lankan society and folk songs play a pivotal role in expressing the spiritual dimensions of diverse faith traditions. Whether in the Sinhala Buddhist, Tamil Hindu, Christian, or Muslim communities, religious folk songs serve as vehicles for conveying devotional sentiments and narratives. The occupational diversity within Sri Lanka also finds expression through its folk songs, which chronicle the laborious routines and unique skills associated with various professions. From songs of fishermen casting their nets to those depicting the rhythmic beat of agricultural activities, these compositions serve as sonic narratives of the island's economic tapestry. Beyond amusement, festivals, occupation and religion, Sri Lankan folk songs encompass a myriad of themes reflecting everyday life, love, nature and societal dynamics. Philip Bohlman (1988) stressed the vitality of folk music in non-Western cultures. The Kulatillake collection is an asset to scholars who accept "folk music as the product of new cultural processes, especially modernization and urbanization" (Bohlman, 1988, p. xix). Furthermore, Bohlman asked if scholars might reformulate the

canons of folk music to recognise the new texts that change has yielded to folk music.

Exposed to a philosophy of revival of tradition and fostering a vision of the unity of humanity through universal knowledge (*Visva Bharati*) transcendence of religious and cultural barriers is apparent in Kulatillake's collection, which includes the music of the multi-ethnic multi-religious culture scape of Sri Lanka. Instead of collecting music of the larger ethnic groups such as the Sinhalese and Tamils, Kulatillake included music of the Veddas, Burghers and Afro-Sri Lankans also, in addition to the music of the Tamils and Sinhalese, acknowledging the diversity in the music landscape. The Veddas or *Wanniyalaeto* have a song for every activity such as honey gathering and a unique lullaby. Chant-like songs of "Afro-Sri Lankans" (i.e. of African descent) are called *Manja* and are accompanied by drumming to remembered rhythms and dancing. The Portuguese Burghers traditional music, song and dance are called *Kaffrinha*. The Tamil people of Sri Lanka have a variety of traditional songs, including those about their faith, profession, festivals and entertainment. The content of Kulatillake's collection will be explained in what follows.

Restoring and digitising the collection

Fig.4 and 5 show the spool tapes researchers found. The recordings are currently stored in the Archive Centre, Department of Ethnomusicology, Faculty of Music, University of the Visual and Performing Arts, Colombo.

Fig.4: Open reel tapes with boxes
Photograph: Kamani Samarasinghe.

Fig.5: Tapes used during recording.
Photograph: Kamani Samarasinghe.

A vacuum cleaner was first used to remove the dust. Each tape was then evaluated, cleaned, and the front and back of the tape container were photographed. The reel itself and any supplementary documents or notes inside the box were also photographed. Due to the absence of playback equipment at UVPA, all the tapes were entrusted to an external professional for digitisation. The recordings were digitised at 44.1 kHz sampling rate and a bit depth of 16 and saved as uncompressed WAV files, following standard practice in Sri Lanka. The provider was instructed to split distinct tracks within a single reel into separate audio files. The majority of the tapes bore handwritten notes by Kulatillake, authenticated with his signature and accompanied by dates of his field recordings **(Fig.6).**

Fig.6: A tape with Kulatillake's handwritten notes and his signature.
Photograph: Kamani Samarasinghe.

AMPEX , BASF, AGFA, Maxell, as well as EMITAPE brands were present in the collections. There was a variety of reel sizes found, with the majority of the reels having a diameter of 5 inches. The two primary tape speeds were 7½ and 3¾ inches per second. The recordings were often made using different track configurations, such as quarter-track, full-track, or half-track per side. All the tapes in this historical field recordings were successfully digitised because they were in good condition; restoration works not needed. Each tape could result in a number of digitised audio files. Once digitised, the file was saved as a WAV format.

Content of the collection

This collection comprises a diverse array of music recordings, representing a tapestry of ethnic groups. In the *Population of Sri Lanka in 1971* (1972, p. 44), the ethnic groups were Sinhalese (Low country and Kandyan), Tamils (Ceylon and Indian), Burghers and Eurasians, Malays, Veddas (*Vanniyalaaththo*) and Afro-Sri Lankans. Within this unknown collection, one can find the Sinhala music, Tamil music, the Portuguese Burghers' *baila*[2] songs, and even the

[2] A genre associated with the Portuguese colonizers. See Ariyaratne (2007); de Silva Jayasuriya (2008; 2013).

Veddas' songs. Together, these recordings offer a harmonious blend of cultural expressions, weaving a vibrant narrative of Sri Lanka's diverse heritage. The audio tape recordings have been tabulated from Kulatillake's original handwritten notes and voice recording. Genres in Table 1 below are explained in the pages that follow.

Location of Recording	**Type of Recording and Genre**[3]
Embekke, Kandy	Instrumental Music
Arugambay	*Nadagam* music (traditional drama music)
Henanigala	Vedda lullaby, Vedda *bambara* (wasp) *yaadini* (prose narration)
Idamegama, Kandy	*Nelum kavi* (weeding, planting/transplanting poetry)
Horana	*Vannams*[4]
Millana	Vedda songs
Unspecified	*Kurahan kavi*, *Rankothalae kavi* (a folk poem associated with a small clay pot filled with turmeric water used by dancers in rituals), *kohoba heella* (poetry about the god Kohoba), drum music, *Thuranga* (horse) *vannama*
Uduwa	*Raban pada*
Unspecified	Tamil fisherman song, *Pasam*
Batticaloa (1972)[5]	*Naatu Kuttu* (Tamil folk drama), Portuguese *baila* – wedding song

[3] The genres in the table are explained in the text that follows and the orthography is copied from Kulatillake's handwritings.
[4] *Vannama* (singular), *Vannam* (plural) in Sinhala. According to Almut Jayaweera (2004, p. 2) *Vannama* is the Sinhala version of the Sanskrit word *varnam.*
[5] Only some recordings are dated.

Negombo, Clement's Place (1976)	*Divaya sapprasada pasam kavi*
Mathiwela	*Keli Gee*
Nugawela, Kandy	Drum music of *Kohombakankari* (Kandyan style of dancing), Goddess Pattni *Kolmura kavi* (poetries about the life story and power of goddess Pattini)
Ulhitiya (1983)	Vedda songs
Mampitiya, Tirappuwa, Araththana, Handessa	*Nelum ose, Yashodara* (wife of Prince Siddhartha lamentation) *wilapaya, Nelum kavi*
Bentare and Urugasmanhandiya (1988)	*Kiri amma kannalaw* (array of female deities who are supposed to inflict sickness on children) and verses
Kandy	*Kuveni Asne* (type of prose narration with a particular arrangement and moods the lamentation of the Yakkha girl Kuveni who had been banished together with her children by her husband, Prince Vijaya)
Unspecified	Christian *geethika* (hymns)

Table 1: Recording locations and genre details.

Among the captivating recordings in this collection are the folk music of the Veddas, the original inhabitants of the Island (Seligmann and Seligmann, 1911; De Silva, 2011). Veddas are a minority indigenous community that is considered the oldest ethnic group in Sri Lanka (Dona, 2019). According to Kulatillake's handwritten notes which accompanied tape **(Fig.7),** the music of the Veddahs was recorded in Millana, Dimbulagala, Polonnaruwa District, North Central Province, Henanigala, Ampara District, Eastern Province, and Ulhitiya, Badulla District, Uva Province. Vedda's hunting songs, lullabies, love songs and *Kiri Koraha* ritual songs were included in those tapes. *Kiri Koraha* is a ritualistic dance performance practised by the Vedda people to invoke blessings from deities (Rajapakse, 2004). The tape labelled K 14, K19

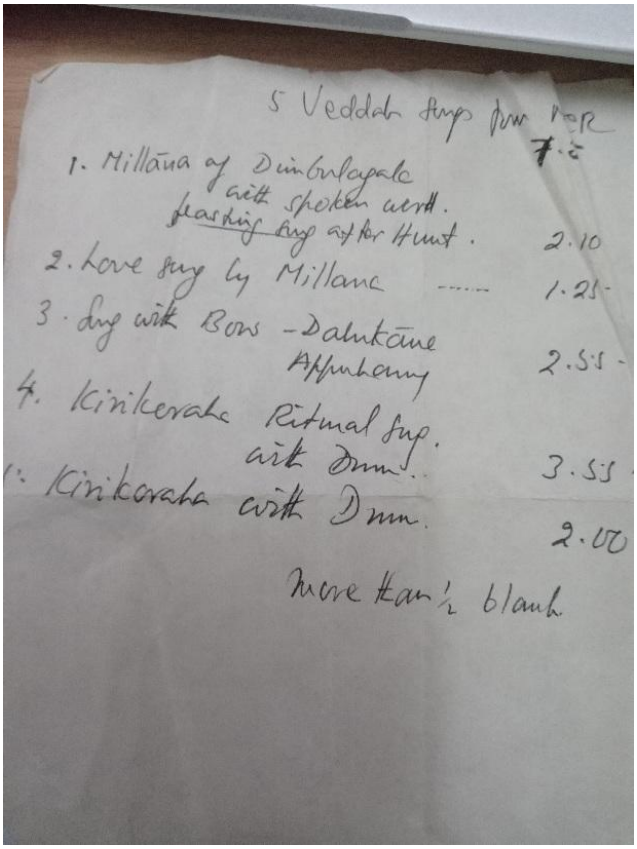

Fig. 7: Millana field recording notes inside the tapes written in English by Kulatillake.
Photograph: Kamani Samarasinghe.

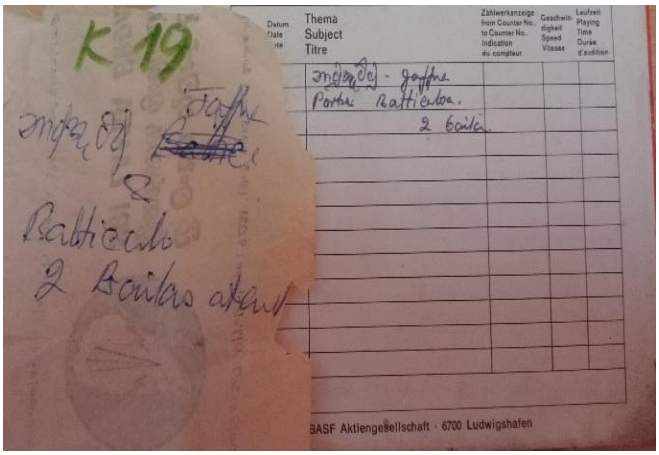

Fig.8: Notes for a tape labelled K19.
Photograph: Kamani Samarasinghe.

included Portuguese *baila* and Tamil *Natukuttu* songs recorded on November 11th, 1972 at Batticaloa, in the Eastern Province **(Fig.8 & 9)**.

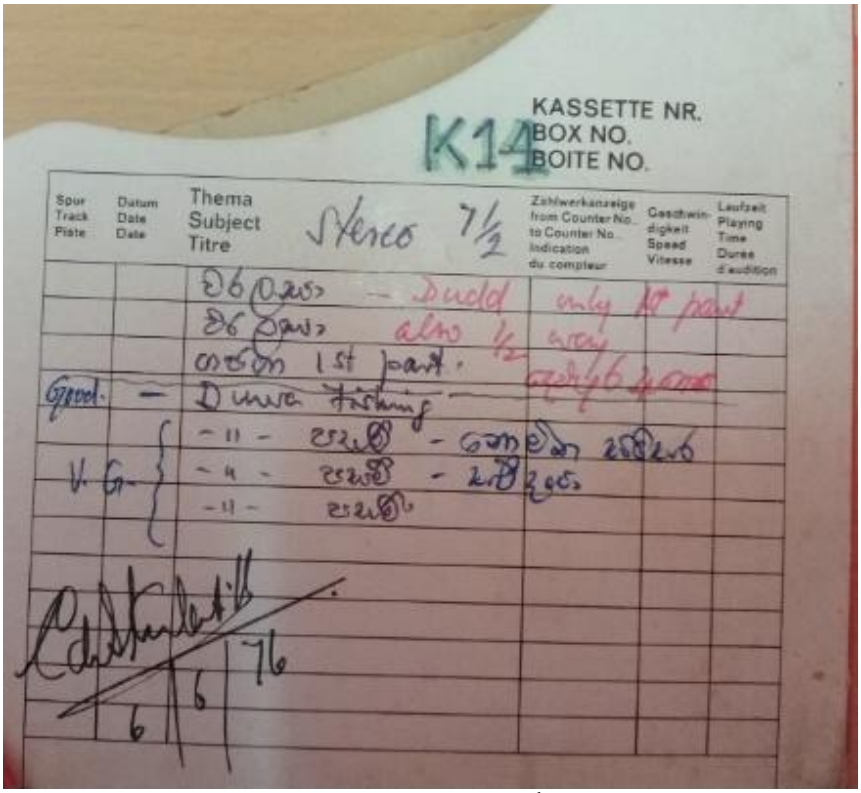

Fig.9: Notes on tape K14 written by Kulatillake on June 6th, 1976, which included *Pasam* or *Pasan* (Passion) songs of the Catholic population in Sri Lanka (Kulatillake 1976; Pilendran 1998).

Photograph: Kamani Samarasinghe.

Pasam songs in Sri Lanka combine South Indian Carnatic tunes with Christian hymns from the imprisonment trial and crucifixion of Jesus (Kulatillake, 1976), and was well recorded with details by him **(Fig.10).**

While transplanting paddy, groups of women sing transplanting songs – *Nelum Gee* (Samarasinghe and Nethsinghe, 2023). The "Ose" style and the "Sindu style" are the two main styles of *Nelum Gee*. Kulatillake recognises a few songs, including *Pirith Ose, Kinduru Ose, Namaskara Ose* and *Horane Ose*. "Ose" style has various forms, all of which are performed at a slow speed, but "Sindu" style is sung at a quicker speed at the end of a transplanting session (Kulatillake, 1976). The literature (Kulatillake, 1975; Rajapakse, 2004; Samarasinghe and Nethsinghe, 2023) reveals that *Nelum* songs are common

in Kandyan villages and this collection includes recordings made in Kandy Idamegama, Tirappuwa, Handessa, Araththana, Mampitiya and Handessa. *Kurahan Kavi* are songs performed while harvesting *Kurakkan* or *Kurahan* (finger millet), which was one of the principal crops farmed in Sri Lanka in general. *Raban Gee* (songs) is a musical tradition performed while playing the *Rabana*, a hand drum held in one hand and played with the other.

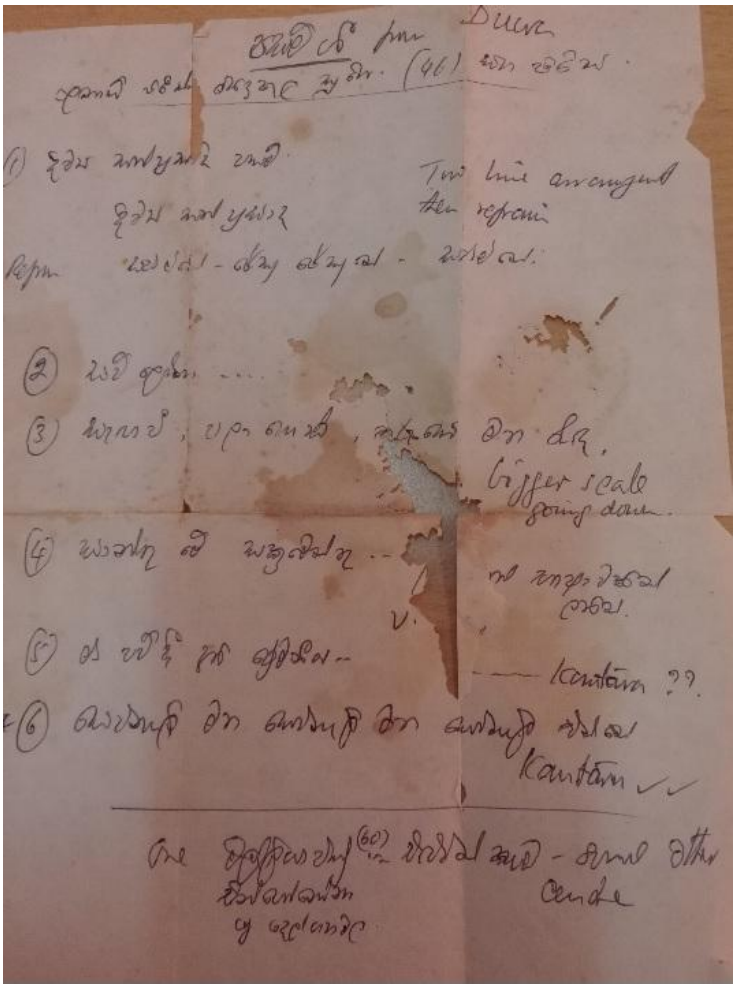

Fig.10: *Pasam Gee* recording notes.

Photograph: Kamani Samarasinghe

According to Kulatillake (1976), *Raban Gee* was well-known among the distinct communities within the Matara, Akuressa, Horana and Huiikaduwa in the Kandy District and this research investigation has identified a recording of *Raban Gee* from the Uduwa region in Horana. *Keli Gee* are

songs that are sung at folk games and dances. The titles of the games, such as *Lee Keli Gee* (Songs of the Stick Dance), help to identify them (Kulatillake, 1976). *Vannam* are "a type of songs originally composed for singing in the courts. At present there is a set of *Vannams* popular among the traditional dancers who have transformed them into 18 dance solo episodes (known as *Daha-ata Vannam*)" (Kulaatilleka 1976).

Those solo episodes are (according to Jayaweera, 2004; Kulatillake, 1976): *Ganapathi* (about God Ganesh), *Musaladi* (Hare) *Vannama, Gajaga* (Elephant) *Vannama, Vairodi* (the Cat's Eye/Precious Stone), *Hanuma* (Monkey) *Vannama, Thuranga* (Horse) *Vannama, Udara* (on bravery) *Vannama, Gahake Vannama* (Vannama of the Conch), *Surapathi* (about Umayangana) *Vannama* audio recording made in the Horana area in the western province and other unnamed places. *Vannam* forms an important part of music in the Sinhala tradition. This research identified *Ganapathi* (about God Ganesh), *Musaladi* (Hare) *Vannama, Gajaga* (Elephant) *Vannama, Hanuma* (Monkey) *Vannama, Thuranga* (Horse) *Vannama, Vairodi* (Cat's Eye/Precious Stone), *Udara* (about bravery) *Vannama, Gahake Vannama* (*Vannama* of the Conch) recording made in the Horana area. Within this collection of reel-to-reel tapes, a diverse soundscape of Sinhalese folk songs is preserved, including the enchanting melodies of *Nelum Gee*, *Kurahan Kavi*, *Rankothalae Kavi*, *Raban Pada*, *Keli Gee* and *Vannams*. These recordings capture the diverse cultural expressions in various regions across Sri Lanka, offering a unique sonic collection that reflects the vibrant musical heritage of the island. The nuanced exploration of these traditional tunes provides valuable insights into the regional variations and cultural richness embedded in the fabric of Sri Lankan music.

The files and metadata are not yet accessible on-line because the Department of Ethnomusicology due to financial constraints. Discussions on making the collection available worldwide are ongoing. Ethnomusicologist could make field recordings today and make comparisons with the 1970's Kulatillake historical collection.

Conclusion

The journey to preserve a part of the C. de S. Kulatillake field recordings is a vital step in conserving Sri Lanka's rich cultural heritage. The collection, assiduously gathered and transmitted by Kulatillake, captures not just the

rhythms and melodies of a diverse and culturally dynamic nation, but also its nuances. The discovery of a treasure trove of open reel tapes, meticulously documented by Kulatillake, provides a unique glimpse into the cultural diversity of Sri Lanka. From Vedda music to Portuguese *baila* songs and Tamil *Natukuttu*, these recordings represent the multiplicity of cultures that form an intricate soundscape of ethnic groups, each contributing to the vibrant sounds of Sri Lanka's cultural heritage. Of particular significance are the Vedda music recordings, bearing witness to the oldest ethnic groups. These recordings offer invaluable insight into the rituals, hunting songs, lullabies and *Kiri Koraha* ritual dances of the Veddas. Kulatillake's collection reveals a rich diversity of cultures present on the island, from the mournful *Pasam* songs to the melodious *Nelum Gee* and the rhythmic *Raban Gee*. This research paves the way for continued exploration, analysis and appreciation of multifaceted traditions that make up the sonic landscape of the island. We not only pay tribute to the pioneering work of C. de S. Kulatillake, but also reaffirm our commitment to safeguard musical heritage that continue to resonate through the melodies and rhythms of the past. This exploratory case study is intended to inspire further initiatives in safeguarding historical audio archives and ensure that the echoes of Sri Lanka's diverse cultural heritage are preserved for future generations to explore, experience and identify with.

Acknowledgements

We would like to thank Mr. Mahinda Senevirathne (UVPA), Professor Jim Sykes (University of Pennsylvania) and Professor Ranjith Fernando (UVPA) for supporting this project.

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Arts-in-Medicine, with dance as a key modality

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Abstract

This study explores how Bharatanatyam-based performance session within a medical humanities program can support transformative learning and the development of professional virtues in undergraduate medical students. The focus is on empathy, moral reasoning, and person-centered care, resilience, and reflective capacity among clinically exposed fourth year student through a case study observation. The Humanitas programme at the Faculty of Medicine, University of Colombo is a two hour, arts cantered Teaching Learning Activity (TLA) delivered to fourth year medical students, using a range of art forms. Within this TLA, for the components on dance, Indian classical dance had been used. Primarily, Bharatanatyam recitals are used as main modality of dance with carefully chosen music, choreographic motifs, and *'abhinaya'* (expression) are used to embody ethically and emotionally salient themes such as suffering, compassion, balance, empathy, planetary health, and relational complexity in clinical practice. Across twenty-one Humanitas sessions held during and after the COVID-19 pandemic, ten incorporated dance and six specifically utilized Bharatanatyam; after each session, students completed handwritten and online feedback forms, generating quantitative rating (e.g. on content, relevance, and artistic features) and qualitative reflections on their learning. Bharatanatyam-based Humanitas programme recitals were rate highly relevant and enjoyable, and students' reflections showed enhanced empathy, moral reasoning, person-centeredness, resilience, and reflective capacity. The alignment of strong quantitative ratings with rich qualitative themes suggests that dance offered and engaging and emotionally resonant medium for transformative learning. Embodied and aesthetic aspects of Bharatanatyam appeared to deepen students' understanding of human suffering, relational complexity, and the need for self-care clinical practices. Integrating Bharatanatyam into a structured medium humanities program can meaningfully support the development of core professional virtues in clinically exposed medium students. These findings

support the inclusion of arts-in-medicine, with dance as a central modality, as a valuable component undergraduate medical education.

Keywords: Medical Humanities, Indian Classical Dance, Bharatanatyam, Vacikabhinaya

Introduction

Role of arts and humanities in medical education

The place of arts and humanities in medicine is to foster person-centered care and to cultivate passion, empathy(Levett-Jones *et al.*, 2024), and moral reasoning in future doctors(Zhang, Pang and Duan, 2023). Integrating the arts provides a powerful medium through which such humans virtues can be communicated and internalized(Dalia, Milam and Rieder, 2020), moving beyond the limitations of traditional lectures and conventional small-group, didactic discussions(David, 2024). Even within small-group formats, the deliberate use of artistic stimuli can provoke emotional, moral, or intellectual dissonance in learners(Rezaei *et al.*, 2023), which then becomes the basis for guided reflection(Wan Mohd Zohdi and Azme, 2025). This process aligns with the principles of transformative learning(Greenhill *et al.*, 2018), a recognized educational theory in medical education(Rojo *et al.*, 2023), wherein a significant shift in perspective occurs through critical reflection on disorienting experiences(Wangding *et al.*, 2024). Grounded in this theory of transformative education, the Humanitas program was conceptualized and implemented.

Overview of the Humanitas program

The Humanitas program is a unique flagship medical humanities initiative at the Faculty of Medicine, University of Colombo(Jayasinghe and Fernando, 2023). It is delivered as a two-hour session for fourth-year medical students who have prior exposure to both theoretical knowledge and clinical practice, making them particularly well positioned to appreciate complex human problems and ethical dilemmas(Appan, 2018). Each Humanitas session focusses on a theme that is relevant to moral enhancement and professional identity formation, with the aim of nurturing core virtues in medical practice, including compassion, balance in life, resilience, a sense of universality, environmental consciousness within the framework of planetary health and

personal development in managing emotions and relationships. Similar emphases on balancing professional demands and personal well-being, and their effects on intentions to stay or leave, have been observed in the Sri Lankan context among employees and dual-career families(Priyashantha and Hunnes, 2011). In Humanitas multiple forms of art and narrative are incorporated, and structured discussion is woven into the artistic material itself(Purser, 2019). Art acts as a means of creating an intellectual, moral or emotional crisis in the student and compels them to reflect on the theme or idea discussed. At the end of each Humanitas programme student feedback is obtained(Jayasinghe and Fernando, 2023).

Bharatanatyam in humanities session

In this design, art functions as the central pedagogical device, with conversation and critical reflection being deepened and intensified through engagement with artistic work-particularly dance(Mukunda *et al.*, 2019). The Humanitas program was initiated during the COVID-19 pandemic. Out of twenty-one Humanitas sessions conducted, ten included dance performances, and six of these utilized the Indian classical dance form Bharatanatyam, to explore diverse themes. At the end of each Humanitas session, a feedback questionnaire is shared with students. This instrument comprises a quantitative component, in which participant's rate aspects such as theme, content, speakers, art features, and a qualitative component, in which they elaborate on their views regarding the artworks and other elements presented in the program. Carefully selected music and choreographic material are used for thematic interpretation within the idiom of Bharatanatyam, with the focus on conveying ethically and emotionally salient ideas rather than on technical appreciation of the dance form. The audience is not expected to be formally trained in this art form; rather, they are invited to engage with the underlying concepts and experiences being communicated through the performance. To achieve this, particular theoretical constructs, aesthetic aspects, and distinctive features of Bharatanatyam are carefully employed so that key meanings can be embodied and expressed through movement and body language in a manner accessible to medical students.

Abhinaya in Bharatanatyam and its theoretical basis

> '*Abhinaya*' is one of the key components of the theoretical elements in Bharatanatyam (Apparao, 1997). *Abhinaya* means the art of expression or "carrying" the meaning and emotion of a performance towards the audience in Indian classical dance and dramas (Vatsyayan, 1977). According to ancient Sanskrit treatise '*Natyashastra*,' written by Sage Bharata in 2nd Century BCE: "*abhinaya is certainly the most prominent of all as that is indispensable in helping to visualize the main import of dance or a play. On examination it has found that each of the four aspect of abhinaya: the sattvika (temperament), the vacika (speech or words), the angika (gestures) and the aharya (costumes and make-up), sub serves the highest dramatic end of the development and manifestation of rasa "the aesthetic pleasure". Music-vocal and instrumental is a powerful aid in the realization of rasa by the spectator"*(Garhwal, 2020).

He tells us how music aids the spectator's realization of *rasa* (taste or aesthetic pleasure) and serves concentrate his attention on the representation of a play on the stage (Garhwal, 2020). In Humanities program, we use insightful verbal interpretation *'Vacikaabhinaya'* to evoke the student's reflections and emotions.

Vacikabhinaya and the aesthetics of sound and meaning

'*Vacikabhinaya*' is crucial because it gives audible form to poetic meaning and *rasa* (aesthetic pleasure), turning movement into a fully 'heard-seen' experience that is '*Sravya drsya kavya.*' When used with sensitivity to text, music, and context, it becomes the bridge that carries the inner '*bhava*' (refers to the subtle, authentic inner feeling or mental-emotional state that underlines and energizes all visible expression in performance) to the spectator through sound and language when used appropriately, it aligns language, prosody, and vocal nuance with gesture and inner feeling so that the audience can 'hear' the '*bhava*' while they 'see' the dance or drama (Ghosh, 1975). *Vacikabhinaya* carries '*artha*' (meaning) and *'rasa'* through choice of words, figures of speech, and the quality of vocal delivery, supporting *angika* and *sattvikabhinaya* in evoking aesthetic pleasure in the spectator. In Sanskrit

aesthetics, '*sabda-rasa*' is the relish or aesthetic pleasure of sound itself, while *artha-rasa* is the relish of meaning; in fully realized '*kavya*' (literature, poetry, song) sound and sense are balanced and the further deepen through '*dhvani*' (suggestion), the resulting *rasa*-experience becomes subtle, stable, and aesthetically 'whole' (Ratnam Rangaraj,1979; Krishna,2022). In Bharatanatyam, *vacikabhinaya* is the main channel through which *'dhvani'* the realm of unsaid but deeply felt meaning enters the performance and reaches the spectator. It gives audible form to poetic meaning and *rasa*, so that the dance becomes *sravya drsya kavya*: poetry that is simultaneously heard and seen.

Dhvani, Vachikabhinaya, and emotional suggestion in Humanitas

In Sanskrit poetics, *sabda* (sound) and *artha* (meaning) together from the body of poetry, but the true soul of poetry is *"dhvani"*- the suggested sense that goes beyond literal meaning(Jha, 2018). This suggestion can arise primarily through meaning (*artha-dhvani*) or primarily through sound and verbal texture (*sabda-dhvani*), though in good poetry both are intertwined(Krishna, 2022). In Humanitas, the spoken or sung text (through *vachikabhinaya*) is handed so that literal translation is not central; instead, its suggestive emotional power-the *dhvani* is foregrounded. When text is delivered with sensitivity to prosody, pause, timbre, emphasis, and musical contour, *vachikabhinaya* activates *artha-dhvani*; hints of grief, surrender, wonder, irony, or quiet resilience that exceed the surface meaning of the words. At the same time, careful attention to sound patterns, alliteration, rhythm, and tone color activates *sabda-dhvani*: the sheer feel of the utterance which itself carries emotional suggestion, even for listeners who do not understand the language fully(Krishna, 2022). Thus, in the Humanitas Bharatanatyam performances, the song (lyrics) is chosen and rendered not just to 'tell' but to suggest, so that the feeling becomes more important than a word-for word semantic grasp of the lyrics.

Embodied "*visual dhvani*" and clinical resonances

According to classical aesthetics, *rasa* is ultimately realized when suggested meaning resonates with the spectator's own latent emotional impression and is supported by visible *anubhava* (expressive signs) and *sanchari bhava* (transitory feeling)(Tharmenthira, 2024). In Bharatanatyam, *angikabhinaya* (body, gestures, facial expression) and *sattvikabhinaya* (tears, stillness, trembling, gaze) visually externalize those emotional suggestions that

vachikabhinaya has already seeded at the level of sound and meaning. When the dancer subtly varies eye focus, breath, gestures in response to particular words, the unsaid emotional layers such as regret, ambivalence, unspoken love, ethical conflict are made visible as a kind of '*visual dhvani'*, the body hints at more than it explicitly shows(Krishna, 2022). In Humanitas context, Bharatanatyam is used quite deliberately. The lyric may, on the surface, speak of a devotee and deity, or of separation and reunion, but *vachikabhinaya* add embodied response allows those same verses to suggest clinical loneliness, moral fatigue, grief, hope, or the tension between duty and self-care in medical life. The students do not need to understand every word, they see and feel the implied emotional layers as the dancer's body and voice together generate a layered, "hear-seen" *dhvani* that points beyond the literal song to the unsaid inner experience.

Educational purpose and study aim

When incorporating dance specially Bharatanatyam into the medical Humanities, it facilitates **rehumanizing clinical language**, **enhancing cross-cultural communication**, and **identifying barriers to healthcare access**. By allowing them to interpret patient's embodied, visceral responses for a narrative approach enabling them to make the patient more familiar. (Eli and Kay, 2015). Thus, the present case study aims attempts to explore how Bharatanatyam-based sessions within the Humanitas medical a TLA in the Medical humanities curriculum to facilitate transformative learning and foster key professional virtues among undergraduate medical students.

Literature Review

Medical humanities, empathy, and professionalism

Medical humanities have increasingly been integrated into undergraduate and postgraduate curricula to strengthen empathy, moral reasoning, and other core elements of professional identity in medicine Systematic and narrative reviews suggest that well-designed medical humanities interventions can positively influence empathy and related dispositional qualities in medical students and practitioner (Dalia, Milam and Rieder, 2020; Zhang, Pang and Duan, 2023; Wan Mohd Zohdi and Azme, 2025). The recent met-analysis on the *"educational efficacy of medical humanities in empathy*" reported that

humanities based courses (including literature, visual arts, reflective writing, and theatre) generally let to improvements in measures empathy scores, especially when interventions were longitudinal and explicitly linked to clinical practice (Zhang, Pang and Duan, 2023). Another integrated review on integrating humanities into medical education emphasized that humanities teaching supports not only empathy, but also ethical reasoning, narrative competence, and a richer understanding of the patient's lived experience-all core to person-centered care. Parallel work on professionalism education indicates that multi-model, value-oriented curricula are effective in promoting aspects of professionalism, while also highlighting the need for clearer theoretical grounding and robust study designs. Together, these findings justify the use of a humanities-rich program such as Humanitas to foster empathy, moral reasoning and professional identity formation in medical students(Sadeq *et al.,* 2025).

Arts-based education, reflection, and transformative learning

Within the broader humanities literature, specific attention has been paid to arts-based educational approaches as vehicles for reflection and transformative learning. Reviews of art in medical education show that visual arts interventions can improve observational skills, tolerance for ambiguity, and reflective capacity, and may contribute to empathy and cultural sensitivity (Dalia, Milam and Rieder, 2020; Rezaei *et al.*, 2023). For example, a visual-art-and-reflection curriculum for medical students demonstrated improvements in perspective-taking (a cognitive dimension of empathy) and helped learners appreciate multi viewpoints in clinical encounters (He *et al.*, 2019). In parallel, decision-making about careers and professional pathways among undergraduates in Sri Lanka also reflects significant psychological loads and indecision, highlighting the importance of structured spaces for reflection and identity formation(Maduwanthi and Priyashantha, 2018). Scoping the theoretical reviews on transformative learning in health professions education explicitly draw on Mezirow's concepts of "disorienting dilemmas," critical reflection, and perspective transformation, and document a growing use of this framework in medicine, nursing, and allied health programs (Greenhill *et al.*, 2018; Rojo *et al.*, 2023). Art-and-humanities-based teaching is frequently cited as a fertile context for such disorienting experiences (Wangding *et al.*, 2024), because engagement

with artworks can evoke emotional or moral dissonance that prompts learners to question prior assumptions(Gower *et al.*, 2026). When this dissonance is followed by structured, guided reflection, studies indicate that learners may re-examine their frames of reference and develop more nuanced, patient-centered perspectives. These intentionally uses artistic material to evoke emotional and ethical questioning and then channels this through facilitated reflection in line with transformative learning theory (Kovach *et al.*, 2023).

Dance and movement in medical and health humanities

While visual arts and literature dominate much of the medical humanities literature, there is a growing body of work advocating for dance and movement-based approaches. From a health humanities perspective, dance has been described as a mode of 'intercorporeality' that can reconnect learners with their own embodiment and with the embodied experiences of patients. Purser argues that dance can mitigate suffering, challenge reductive biomedical framings, and open space fore-imagining what it means to be human in context of illness and care (Purser, 2019). Empirical work on dance in health-professional training suggests that movement can support communication, humanization, and self-awareness. A study of humanistic training in medicine through dance reported that dance activities facilitated affective communication, promoted self-knowledge, help students feel closer to patients, and contributed to a more humanized view of care (Lisboa *et al.*, 2021). Other educational reports and reviews note that integrating creative arts and movement into health curricula offers student's opportunities for self-expression, stress relief, and exploration of professional identity in ways that complement more cognitive, text-based humanities interventions. Such evidence underlines the legitimacy of dance as a serious pedagogical modality within medical humanities and aligns with the Humanitas program's emphasis on dance as a central, not peripheral, learning medium (Lisboa *et al.*, 2021).

Indian classical dance, Bharatanatyam, and clinical communication

Within the dance and health literature, "Mudras in Medicine" project, an oncology education initiative built around a Bharatanatyam based performances, showed that classical Indian dance can effectively communicate narratives of cancer, suffering, healing, and hope, while

heightening clinicians' awareness of non-verbal communication and enriching their understanding of patients' emotional worlds (Bharadwaj, Nagda and Goyal, 2023; Iyengar, 2025). These findings support the use of Bharatanatyam not only as an aesthetic form but as a structured pedagogical tool within medical and health humanities education. Beyond formal medical training contexts, recent scholarship suggests that Bharatanatyam can help with emotional regulation, psychological wellbeing, and social connection, and that audiences can meaningfully engage with complex themes such as grief, hope, or moral conflict communicated through this form (Iyengar, 2024). Taken together, these studies suggest that Bharatanatyam is not only an aesthetically rich art form but also a powerful teaching tool through which difficult ethical and emotional ideas, suffering, resilience, rational conflict, and moral agency can be embodied and shared with learners, even when they have no prior dance training (Balaji, 2024; Ganesh *et al.*, 2025).

Positioning Humanities and the present study

Despite the growing body of work on medical humanities and art-based education, important gaps remain. Most empirical studies and reviews focus on visual arts, literature, or reflective writing, while dance and movement-based interventions are still relatively uncommon, particularly in undergraduate medical education(Dalia, Milam and Rieder, 2020). Evidence from Sri Lankan professionals shows how work–family conflicts and changing gender role expectations shape turnover intentions, underlining why curricular attention to balance and identity is critical(Silva and Priyashantha, 2014). Among the small number of studies that use classical Indian dance forms such as Bharatanatyam in medical education, many are descriptive case examples that highlight narrative and non-verbal communication, but do not explicitly draw on transformative learning theory or systematically evaluate learner outcomes(Bharadwaj, Nagda and Goyal, 2023). There is a strong shortage of published work from South Asia and especially from Sri Lanka on structured medical humanities programs that integrate performing arts into teaching for students who already have clinical exposure. In this context, the Humanitas program at the Faculty of Medicine, University of Colombo, and particular its Bharatanatyam based dance sessions, represents a distinctive designed to promote transformative learning and key professional virtues in fourth year medical students(Jayasinghe and Fernando, 2023). By analyzing

qualitative and quantitative feedback from multiple sessions, the present study helps address the gaps noted above and add to the literature on medical humanities, arts based pedagogy, and dance as an embodied way of fostering empathy, moral reasoning, resilience, and person-centeredness in medical education.

Methodology

Study design

This study employed a descriptive mixed-methods design focusing on program documentation and student feedback from Humanitas programme. Data for this study were drawn from twenty-one Humanitas sessions conducted for fourth year medical student at the faculty of medicine. Seven of these sessions were delivered online, while the remaining fourteen sessions from the eighth Humanitas onwards were conducted on-site. The present study only considered the feedback received for the on-site program as the online programs did not include dance recitals. Table 1. Presents an overview of all twenty one Humanitas sessions and their corresponding thematic focus. Table 2. Provides a detailed breakdown of those sessions in which dance and particular Bharatanatyam was incorporated as a central pedagogical element. For each Bharatanatyam based session, the table documents the specific songs or lyrical pieces utilized, along with their thematic significance. It summarizes these pairings by listing, for each program, (1) the name ad hematic focus of the Humanitas session, (2) the song used (including language, title, and source tradition), and (3) the core lyrical meaning and its pedagogical significance. The song ranged across Sinhala, Bengali, Tamil folk, Sanskrit and Telugu repertoires such as love lyrics watched over by the moon, Arjuna's moral dilemma in Mahabharata, Rabindranath Tagore's devotional poetry, an 'ode to soil' on planetary health, romantic longing and healing, and the *Upanishad* prayer, each chose because its narrative and emotional content could be interpreted choreographically to align with the corresponding Humanitas theme. This mapping made explicit how lyrical components were used by the dancer to embody and communicate ethical, emotional, and existential dimensions highlighted in each Humanitas session.

Study analysis

The analysis focused specifically on student feedback related to the Bharatanatyam repertoires presented during these programs, examining both their educational impact and perceived relevance to medical humanities outcomes. Quantitative and qualitative data were obtained from post-session feedback questionnaires, in which students rated selected aspects of the Bharatanatyam items and provided reflections on their experiences **(Table 1 & 2)**.

Quantitative responses pertaining to the Bharatanatyam components were entered into SPSS (version26) for descriptive and inferential statistical analysis, as appropriate to the study aims which was presented in the **Table 3.** Qualitative responses were imported into ATLAS.ti (version 24) and analyzed using a thematic analysis; initial codes were generated inductively from the data and then grouped into high-order themes related to empathy, moral reasoning, person-centeredness, and professional identity.

Table 3 presents the Thematic Analysis of the Humanitas Programme. Analysis was performed using an inductive approach, coding the raw feedback from 14 distinct sessions. Codes were then categorized into the four overarching themes listed above to illustrate the impact of performing arts on medical education. The analysis follows the Braun & Clarke methodology to identify patterns in student experiences regarding the use of dance and movement providing an in-depth thematic analysis of 14 feedback sessions from the Humanitas programme. It expands upon the initial guides of Physical and Psychological aspects to explore the deeper pedagogical and clinical implications of dance in medical education.

Name of the Program	Theme of the program
Sea life beyond the ship	Life of fishermen by the sea after the Xpress pearl ship disaster
Does the kaduwa hurt **Kaduwa- sward*	Adjusting to a university education in English and linguicism
Together in this world	A glimpse in to the world of animal welfare
Their hearts under this needle	Unfolding the lives of garment factory employees

Imagine all the people	Being peaceful in troubled times
I am Love	The LGBTQ community in Sri Lanka
Cancer & Us	Experiences of family members of cancer patients
Life in Dance	Understanding human emotions and physical intelligence through dance
Members Only	Managing heartbreak
World of fathers	Fatherhood
Teachers: Divine? Difficult? Diminishing?	The changing role of the teacher
The nectar of life	The importance of friendship in life
Universal Man	Philosophy of Rabindranath Tagore
Life, like a river	Stoic philosophy
The Pale blue dot	Planetary health
Tight rope	Work life Balance
Our Muslim community in Sri Lanka	Cultural identity series- Muslim community in Sri Lanka
Members only: 2	Magic of love, pain of heartbreak, path to healing
Tree of success	What is success?
This beautiful life	Resilience and reflection
The final court	Integrity

Table 2: Names of twenty-one Humanitas and themes

Name of the Program	**Song**	**Type of musical component and interpretation**
Life in Dance (Physical & psychological effect of dance on the dancer)	Sinhala song - "*Sanda horen bala*"	This translates to the moon, secretly watching. The song's central theme is a tender, intimate love story, with the lyrics suggesting that the moon is a silent spectator to the lovers' sweet discussion and moments of affection.
The nectar of life (The importance of friendship in life)	Sanskrit and Telugu song- Verses and lyrics attributed from a Tamil Composition, *Sri Krishna Vaibhavam*	It's about *Kurukshetra* war in the epic of Mahabharata. Seeing Arjun's dilemma, Krishna reminds Arjun that as a Kshatriya, his dharma is to fight to uphold righteousness against unrighteousness and turning away from this duty is spiritual weakness.
Universal Man (Rabindranath Tagore and his universality)	A Bengali song "*Sajani*"	Raindrop Sangeet by Tagore, expressing divine love, devotion, and spirituality yearning, where Radha calls to her Krishna.
The Pale blue dot (Planetary health)	A Tamil language folk song "*Kaathuvaakula"*	An "Ode to soil-conscious planet, save soil." The lyrics aims to capture the vibrant rural spirit and highlight the vital connection between human life and the earth.
Relationships (Magic of love, pain of heartbreak, path to healing)	Sinhala song - "*Praathihari*",	Songs' lyrics focuses on themes of beauty, attraction, and romantic anticipation. "*Prathihari*" was interpreted as miracle or wonder. The lyrics vividly describes the admiration of beauty, romantic longing, and anticipation and vigilance.

The final court (Integrity)	Sanskrit Shloka followed by song in Hindi- "Asathoma Sathgamaya..."	lyrics explains the profound spiritual message of seeing truth, light, and immortality, representing a universal prayer form the Upanishads for guidance from illusion to reality, darkness to wisdom, and mortality to eternal liberation.

Table 2: Humanitas session themes, selected songs, and their lyrical meaning used as the basis for Bharatanatyam interpretation

Results and Discussion

Results

Across the fourteen on-site Humanitas sessions that includes Bharatanatyam or other dance-based components, students rated both the relevance of the art/dance and their enjoyment of it high level. As shown in **Table 3**, the mean rating for art/dance relevance across was 85.7% and for enjoyment was 91.4% based on 1,430 questionnaire responses. These high scores suggest that students perceived the dance components as both educationally meaningful and intrinsically engaging within the medical humanities TLA. Quantitative analysis also highlighted four key qualitative identifiers (emotional conveyed, spiritual connection, musical connection, and overall enjoyment). Qualitative analysis showed that students experienced dance as medium for emotional processing, spiritual connection, and mental relaxation, indicating that Bharatanatyam created an aesthetic space for empathy training and existential reflection.

Program	Name	Art/Dance Relevance (%)	Enjoyment (%)	Sample Size (N)
H-08	Dance in Life	92.20%	94.30%	141
H-09	Members only	88.50%	89.70%	107
H-10	World of fathers	94.00%	96.20%	151
H-11	Teachers' Humanitas	94.00%	96.20%	133
H-12	Friends	98.00%	94.50%	203
H-13	Universal Man	59.70%	100.00%	67

H-14	Resilience/Stoicism	91.50%	96.60%	177
H-15	Planetary Health	89.20%	100.00%	81
H-16	Tightrope (Balance)	85.50%	88.40%	69
H-17	Our Muslim Community	84.80%	90.20%	92
H-18	Relationships	75.30%	83.10%	77
H-19	Compassion	87.10%	90.50%	63
H-20	This Beautiful Life	100.00%	100.00%	5
H-21	The Final Court	64.10%	64.10%	64
Average				
Relevance			Enjoyment	Total
85.70%			91.40%	1,430

Table 3: Student rating of art/dance relevance and enjoyment for Bharatanatyam-inclusive Humanities sessions

Thematic analysis **(Table 4)** identified four core themes- emotional catharsis and self-regulation, relational humanism, embodied empathy, and professional identity and balance-demonstrating that the performances supported stress relief, humanized teacher-student relationships, deepened understanding of others, and highlighted the need for life-work balance in medical practice.

Core Theme	Sub-Themes	Primary Sessions	Illustrative Qualitative Data
1. Emotional Catharsis & Self-Regulation	- Stress alleviation - Mind-body relaxation - Freedom of expression	Humanitas 08, 14, 15, 20	"A great way to vent out the stress we have been carrying... it felt like a heavy weight was lifted from my mind."
2. Relational Humanism	- De-hierarchization - Peer bonding	Humanitas 09, 11 (Teachers), 19	"Seeing our lecturers and friends in this light made the

	- Breaking the 'Medical Shell'		environment feel safer... it humanized the people we usually only see as 'stiff' professionals."
3. Embodied Empathy	- Non-verbal communication - Understanding the 'Other' - Emotional dexterity	Humanitas 10 (Fatherhood), 13 (Tagore), 21	"I never thought movement could explain so much about life. It helped me realize that everyone has a story behind their face."
4. Professional Identity & Balance	-Holistic growth -Ethical sensitivity -Resilience building	Humanitas 12, 16 (Tightrope), 18	"The dance made the concept of 'balance' very physical and real. It's a lesson for our future life as doctors where we must balance everything."

Table 4: Thematic analysis extracted to core themes

A further bio-psychological lens **(Table 5)** indicated that physical aspects of performance enhanced students' observational and non-verbal communication skills, while psychological aspects provided safe emotional ventilation and resilience building, aligning with key outcomes of medical humanities TLA curriculum. The analysis demonstrates that the 'Physical' excellence of the performance serves as a 'Cognitive Hook,' lowering the student's defensive barriers and allowing for 'Psychological' and 'Spiritual' engagement. For the medical student, dance is not merely an extracurricular

activity; it is a laboratory for non-verbal communication, emotional regulation, and humanistic empathy.

Core Theme	Conceptual & Pedagogical Dimension	Elaborated Analysis & Illustrative Data
Physical Aspects	Kinesthetic Synchrony & Expressive Literacy	Students emphasized 'eye-catching' coordination and 'well-expressed' body language. In medical training, this transcends entertainment; it fosters 'Clinical Observation'—the ability to read subtle physical cues in patients. Feedback: 'The synchronization was mesmerizing; it showed how much can be said without words.'
Psychological Aspects	Emotional Ventilation & Resilience Building	The 'romantic,' 'emotional,' and 'relaxing' nature of the dance acted as a 'Safe Space' for catharsis. It allowed students to process personal and academic stress through a medium of beauty rather than burden. Feedback: 'It

		was a mind-relaxing experience that helped me forget the heaviness of the wards for a moment.'

Table 5: The Bio-Psychological of performance

Discussion

Taken together, the quantitative and qualitative findings indicate that Bharatanatyam-based components of the Humanitas program were both well accepted and pedagogically impactful, directly supporting the study's aim of facilitating transformative learning and cultivating professional virtues in medical students. High ratings for relevance (mean =85.7) and enjoyment (mean = 91.4) suggest that dance functions as an engaging entry point into complex ethical and emotional themes, while student narratives show that embodied, non-verbal expression helped them rehearse empathy, moral reasoning, and self-regulation in a low-risk environment. By linking aesthetic experience with reflection on clinical life, the Bharatanatyam sessions appear to contribute to person-centeredness, resilience, and reflective capacity, reinforcing the value of arts-in-medicine as a core, rather than peripheral, element of undergraduate medical education.

Theme 1: Emotional catharsis and self-regulation

This theme emerged particularly strongly form sessions focused on stress alleviation and mind-body relaxation **(Table 4: Humanitas H-08, H-14, H-15, and H-20)**. Students described experiences of emotional release – "a great way to vent out the stress we have been carrying"-alongside testimonies of substantial psychological relief, with one participants noting "it felt like a heavy weight was lifted from my mind." The embodied, non-verbal nature of the dance allowed students to access and express emotions that might otherwise remain unexamined, supporting the development of emotional regulation capacities essential to sustainable clinical practice. These findings carry profound implications for understanding professional wellbeing and workplace sustainability in demanding fields. The emotional ventilation spaces created through Bharatanatyam performances appear to serve a dual function: immediate psychological relief and protection against long-term professional attrition. Research in organizational psychology demonstrates a

critical relationship between emotional wellbeing and professional retention. Given evidence that dissatisfaction and unmanaged strain can increase employees' desire to leave organizations, such emotional ventilation spaces may have downstream implications for retention within demanding professions(Priyashantha and Hunnes, 2011).

This connection is particular salient for medical education, where burnout and attrition represent significant challenges to workplace stability and quality of care. For medical students entering a high-stress clinical environment, the Humanitas session appear to function as a protective factor, offering a structured, aesthetically grounded opportunity to process and metabolize occupational and academic pressure before they accumulate into burnout or attrition. By providing students with a culturally sophisticated, non-clinical medium for psychological relief-one rooted in classical Indian aesthetics rather than clinical discourse-the program helps foster emotional resilience and sustainable engagement with medical practice form the earliest stages of clinical exposure. The cathartic dimension of Bharatanatyam thus emerges not as mere entertainment or stress relief, but as a preventive intervention with potential implications for the retention and wellbeing of future physicians within the demanding profession of medicine.

Theme 2: Relational humanism and De-hierarchization

A second major theme concerned the ways in which Bharatanatyam performances humanized classroom relationships and disrupted the traditional hierarchies embedded in medical **education (Table 04- Humanitas 09, 11 (Teachers), 19**). Students in sessions H-09 (Members Only), H-11 (Teachers Humanitas), and H-19 (Compassion) reported, seeing faculty and peers in a new light. One student reflected, "Seeing our lecturers and friends in this light made the environment feel safer, it humanized the people we usually only see as stiff profess Compassion) reported perception from role-defined professional to embodied human, appears to support the cultivation of relational humanism and the "breaking of the medical shell" that the program aims to foster. When students encounter teachers and colleagues as complex, feeling beings rather than authority figures, the foundation is laid for more authentic, compassionate peer-learning and mentoring relationships throughout their careers.

The aesthetic space created by Bharatanatyam enables a temporary suspension of hierarchical roles, allowing faculty and students to meet as embodied humans united in shared emotional and existential reflection. This de-hierarchization has particular relevance for fostering collaborative, person-centered clinical teams in future practice, where communication across ranks and mutual recognition of humanity are essential to both patient care and professional satisfaction. By experiencing their educators as vulnerable, emotionally expressive human beings—rather than merely as knowledge authorities—students develop the relational capacity to see patients not as cases or diagnoses, but as people with their own embodied, emotional realities.

Theme 3: Embodied empathy and non-verbal communication

The third core theme encompassed non-verbal communication and what students described as "understanding the other." **(Table 04- Humanitas 10 (Fatherhood), 13 (Tagore), 21).** Particularly in sessions exploring fatherhood (H-10), philosophical universality through Tagore (H-13), and integrity (H-21), students emphasized how movement and facial expression conveyed human meaning and lived experience in ways that words alone could not. One student observed, "I never thought movement could explain so much about life. It helped me realize that everyone has a story behind their face." This observation aligns with the clinical significance of non-verbal literacy: the ability to read subtle physical and affective cues in patients. By engaging with the sophisticated, layered non-verbal communication embedded in Bharatanatyam abhinaya (expression), students were simultaneously building empathic understanding and honing observational skills that directly translate to clinical encounter. The performers' use of hand gestures *(hastas),* facial expressions, and body movement to convey complex emotional states i.e. grief, compassion, ethical conflict, hope provided students with a living laboratory for understanding the embodied dimensions of human experience. This embodied understanding of others is foundational to the person-centred care and clinical empathy that medical education seeks to cultivate. Through sustained engagement with how dancers use their bodies to communicate invisible emotional and moral truths, students develop a somatic competence in reading patients' non-verbal cues-tremors, hesitations, facial expressions-that signal distress, fear, or unspoken concerns.

Theme 4: Professional identity and life-work balance

The final major theme addressed professional identity formation and the recognition of life-work balance as central to sustainable medical practice **(Table 04- Humanitas 12, 16 (Tightrope), 18).** This theme emerged particularly in sessions on friendship and relational continuity (H-12), the "Tightrope" work-life balance session (H-16), and relationship themes (H-18). Students noted, "The dance made the concept of balance very physical and real. It's a lesson for our future life as doctors where we must balance everything. These reflections are deeply significant when contextualized within the Sri Lankan professional and social landscape, where competing demands and evolving role expectations shape professional trajectories in profound ways. The insights from this study resonate with broader research on professional sustainability in South Asia.

The above findings echo broader Sri Lankan findings on how work–family tensions and shifting gender roles shape turnover intentions among professionals, reinforcing the value of early curricular engagement with balance and identity (Silva and Priyashantha, 2014). By introducing the concept of work-life balance through embodied, aesthetic means during undergraduate medical education, the programs i.e. Humanitas, positions an essential dimension of professional identity not as a peripheral wellness concern, a central aspect of clinical practice and professional sustainability.

By making the concept of professional-personal boundary negotiation embodied, visible, and aesthetically explored during medical education, the Humanitas program helps students internalize balance not as an abstract ideal but as a visceral, lived necessity. The "Tightrope" session appears to function as an anticipatory space where students can imaginatively rehearse the tensions they will face as clinicians, developing awareness and potentially more deliberate strategies for identity preservation and self-care. Early engagement with this theme in the undergraduate curriculum may have protective effects against future burnout and attrition, equipping students with both intellectual awareness and somatic understanding of the need for professional-personal integration. For female medical students especially, who often navigate particularly acute role tensions between professional and family demands, this early cultivation of identity awareness and balance-seeking may prove essential for long-term career retention and wellbeing.

Bio-Psychological integration: physical and psychological dimensions

A further bio-psychological lens **(Table 5)** indicated that physical aspects of performance enhanced students' observational and non-verbal communication skills, while psychological aspects provided safe emotional ventilation and resilience building, aligning with key outcomes of the medical humanities teaching and learning activity. The analysis demonstrates that the physical excellence of the performance serves as a cognitive hook, lowering students' defensive barriers and allowing for psychological and spiritual engagement. Students' emphasized eye-catching coordination and well-expressed body language, noting that "the synchronization was mesmerizing; it showed how much can be said without words."

This kinesthetic synchrony fostered what might be termed clinical observation the ability to read subtle physical and affective cues essential to patient care. Simultaneously, the psychological dimensions of the performances created safe spaces for emotional catharsis. As one student reflected, "It was a mind-relaxing experience that helped me forget the heaviness of the wards for a moment." The romantic, emotional, and aesthetically refined nature of the dance acted as a buffer against the cognitive and emotional demands of clinical training, allowing students to process stress through a medium of beauty rather than burden. For the medical student, dance is not merely an extracurricular activity or optional enrichment- it is a laboratory for non-verbal communication, emotional regulation, and humanistic empathy.

Theoretical implications: transformative learning through embodied aesthetics

The above mentioned four interrelated themes support the study's theoretical framework of transformative learning. The Bharatanatyam sessions appear to function through several mechanisms that align with principles of transformative education: first, they create "disorienting dilemmas" by presenting ethical and existential questions through embodied, aesthetic means rather than didactic instruction; second, they invite critical reflection on these themes through the guidance of structured discussion; and third, they enable perspective transformation by making visible and felt the interconnections between aesthetic beauty, human vulnerability, ethical responsibility, and professional identity **(Table 6)** The use of dhvani

(suggested, unsaid meaning) in Sanskrit poetics and Bharatanatyam wherein the deepest meanings are conveyed through implication, tone, and gesture rather than explicit statement, appears particularly well-suited to the particular transformative work, as it invites students to interpret and integrate meaning in ways that are personally and clinically relevant.

Identifier	Deep Analysis & Clinical Significance
# Emotions Conveyed	Students identified a spectrum of emotions (grief, joy, justice). This functions as 'Empathy Training' via mirror neurons, allowing students to experience complex human emotions in a controlled, aesthetic environment.
# Spiritual Connection	Feedback regarding 'inner peace' and 'soulful connection' (e.g., Tagore session) points to 'Existential Humanism.' It reminds future doctors that patients are more than biological cases; they are individuals with spiritual depths.
# Musical Connection	Rhythmic Entrainment: The synergy between music and dance facilitated a 'Flow State.' This is vital for mental health, providing a cognitive break from the high-load analytical thinking of medical school.
# Overall Enjoyment	The high level of enjoyment suggests that the 'Humanitas' program acts as a buffer against compassion fatigue and burnout, fostering a more positive outlook on the medical profession.

Table 6: Deep Analysis of Qualitative Identifiers

Conclusion

The alignment of strong quantitative ratings with rich qualitative themes suggests that dance offered an engaging and emotionally resonant medium for transformative learning. Embodied and aesthetic aspects of Bharatanatyam appeared to deepen students' understanding of human suffering, relational complexity, and the need for self-care in clinical practice. These findings support the inclusion of arts-in-medicine, with dance as a central modality, as a valuable and theoretically grounded component of undergraduate medical education, one that directly supports the cultivation of empathy, moral reasoning, professional identity, and resilience in future physicians. The value of the Humanitas program as a TLA for medical humanities is enhanced using Bharatanatyam.

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Volume - 15 / No. 1
January - June 2025

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