Inter-Relationship of Cultural Intelligence, Emotional Intelligence, Knowledge Conversion Abilities, and Innovation Work Behaviour: A conceptual framework

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Abstract
Organizations and companies demand their employees' constant innovation, where innovative work behaviour (IWB) is a key element of employee and organization success. As IWB is in the highest demand in the marketplace, research on employees IWB has been continually studied by scholars and researchers. Various models and frameworks are offered to check the effect and relationship of IWB with different variables. The study intended to conceptualize the relationship of three key attributes (emotional intelligence, cultural intelligence, and knowledge conversion ability) that affect IWB. The modal can be helpful for universities, organizations, corporate administration, and government education bodies.

Keywords: Culture Intelligence; Emotional Intelligence; Innovative Work Behaviour; Knowledge Conversion Ability

1.0 Introduction
Cultural intelligence (CI) and Emotional intelligence (EI) are defined as human competencies. Cultural intelligence is primarily defined as "the individual differences that contain capability, interests, and personalities that support individuals to function effectively in a multi-culture environment" (Ott & Michailova, 2023). The ability to monitor and analyse one's own and others' feelings and emotions, which helps differentiate between them, and then use the information to guide one's actions and cognition is known as emotional intelligence (EI), which is a subset of social intelligence (Sun et al., 2021). Emotional intelligence (EI) is the capability, talent, or self-apparent ability to recognize, identify, and respond to one's own, other people's, and team members' emotions. People with strong IWB abilities and self-awareness can comprehend other people's feelings (Abdullah et al., 2021).

The presence of knowledge in society needs to be transferred systematically, and the conversion of knowledge is a process. It is highlighted by Nonaka (1994) that knowledge can be transferred and converted. Knowledge conversion abilities are segregated into...
four dimensions: socialization, externalization, combination, and internalization. Moreover, Nonaka (1994) postulated that KCA's process ranges from tacit to explicit and re-transfer from explicit to tacit knowledge.

The development of society comes from innovation, where innovation is a ubiquitous requirement in every aspect of life, especially in professional life. Any institution, organization, or business that wants to survive in the market must be driven by innovation. At the same time, the employees' innovative work behaviour (IWB) is in the highest demand by organizations and institutions to succeed in the business environment (Ayoub et al., 2023). Companies, organizations, and institutions mainly depend on the IWB of their employees. Therefore, they are always looking to appoint employees inclined toward innovative behaviour. They struggle to enhance employees' competencies and skills needed to improve employees' IWB by spending time and money. Innovation in services, education systems, products, and work processes is commonly admired by organizations (De Jong & Den Hartog, 2010). IWB has four dimensions: idea exploration, idea generation, idea championing, and idea application/implementation.

Previous studies have developed various models to explain the correlation between EI, KCA on IWB. Wong and Law (2002) offered EI Scale (WLEI), Nonaka (1994) proposed four stages of KCA and De Jong and Den Hartog (2010) purpose IWB analysis model. Further, it has been found that IWB is strongly related to KCA and EI. Therefore, demand for studies on KCA and EI increased to resolve the misunderstanding and behavioural issues among the employees that influence employee IWB (Malik, 2022).

Although previous studies addressed how individual innovative behaviour is influenced by differences in gender, age, education nationality, background, ethnicity, and race. There is a difference in cultural and emotional states (Wang & Goh, 2020), yet a dearth of literature focuses on the difference between KCA and EI. Therefore, various models and conceptual frameworks were proposed to find the correlation between EI, CI, KCA and IWB. Researchers from different parts of the world investigate IWB, focusing on its antecedents and determinants factors. This paper sought to provide a conceptual framework for the relationship between EI, CI, KCA and IWB. The proposed model will extend the baseline of the knowledge domain and provide organization and institutions guidelines to improve employees IWB by focusing on EI, CI and KCA.

1.1 Research Objectives
A significant amount of research studies contributed to check various factors affecting employee's innovative work behaviour. The study proposes a conceptual framework of how emotional intelligence (EI), cultural intelligence (CI), knowledge conversion abilities (KCA), and innovation work behaviour (IWB) are interrelated and influence each other. The objectives of conceptual framework would be:

To propose a conceptual model that synthesizes the existing literature on innovative work behaviour.

RQ1: What is the best conceptual model of IWB based on existing available literature from two main databases.

2.0 Research Methodology

The current study is aimed to synthesize the available literature on IWB. For the said purpose, three primary databases, Google Scholar, Scopus and Web of Science, were the source of literature. After reviewing the literature, authors developed the critical practices of all three attributes that were common in the literature. All three main concepts emotional intelligence, cultural intelligence, and knowledge conversion ability were synthesized from the available literature and developed the conceptual model. The conceptual model is defined

Fig. 1. Diagram of the flow of four phase
by De Vose, Lattman, Van Der, Welsch, and Otsuka (2023) as a written product that sketched key factors, variables, and concepts in graphic or elaborated the key factors, variables, and concepts in narrative form. The proposed conceptual model sketched and identified from the study Binsaeed et al. (2023); Travis et al. (2023) so that perceived interplay between the key variables affecting the IWB. Thus, as a result of demonstrating the research inductive reasoning and procedure a conceptual model was developed: EI, CI, KCA correlation with IWB.

The researchers developed a search strategy to identify relevant literature on the study, utilizing Scopus, WOS, and Google Scholar. The search was conducted using the keywords: emotional intelligence, cultural intelligence, Knowledge conversion ability, innovative work behaviour. They considered a total of 17310 articles were collected (Figure. 1). The bibliographic data of the articles were imported into EndNote 20 software. The PRISMA given guidelines were adopted and delete duplicate records. The irrelevant articles screening through the abstract, title and non-accessible full text articles.

2.0 The Proposed Model

Figure 2 demonstrates the project model for evaluating the inter-relationship of two independent variables (emotional and cultural intelligence) with the dependent variables (Innovative work behaviour), where knowledge conversion ability mediates between the dependent and independent variables. The framework was designed in light of earlier work offered by other researchers (Malik, 2022; Masrek et al., 2021; Sousa-Ginel et al., 2021; Travis et al., 2023). The model's dependent variable is IWB, De Jong and Den Hartog (2010) offered four IWB dimensions that can be measured through idea exploration, idea generation, idea championing and idea application/ implementation. EI and CI are the independent variables; the four dimensions offered by Wong and Law (2002) are self-emotion appraisal, regulation of emotion, other's emotion appraisal and use of emotion. Ang et al. (2006) give CI dimensions that are metacognitive, cognitive, behavioural and motivational. Knowledge conversion ability is the mediating variable between CI, EI and IWB.

Nonaka and Kogho (2009) given dimensions of KCA are socialization, externalization, combination and internalization.

2.1 Emotional Intelligence

EI is the competence that is highly demanding in organizations. The field of EI has appeared with conjecture and debate. The analysis of the past study on the topic revealed that different organizations and companies checked the benefits and importance of EI by testing their employee's EI on different populations. Kirch et al. (2001) tested the benefits of EI in an accounting firm and estimated that the success of human beings' attributes 80% to EI, and the other 20% could be attributed to IQ. The aptitude for identifying emotion is one of the hallmarks of EI. Sun et al. (2021) define that EI as a type of social intelligence (SI) that involves and deals with the abilities to control other's and one's own emotions, to differentiate among them, that helps to identify one's thinking and actions.

2.1.1 Types of EI Models

EI models are offered and verified by testing through research studies. There are two types of EI models that different researchers developed (i) Trait EI and (ii) Ability EI. "Trait EI" deals with self-reporting; it is the next generation of EI research. A definition elaborated that trait EI is the understanding of one's own EI ability that belongs to analysis via self-report. The subtype of EI involves the human ability to use their emotions, reasoning, and knowledge of emotions that increase thoughts. Among many EI models, Wong is the most famous self-reported EI model. Wong and Law model has been adopted widely due to its validity and reliability (Malik, 2022). Wong and Law is a self-reported EI measurement scale based on four dimensions: expression and appraisal of emotion in an individual, recognition and appraisal of emotions in others, regulation of emotion in an individual, and utilization of emotion to assist performance Wong and Law (2002).

(i) Self-emotion appraisal is such a kind of individual ability to understand people's feelings, and emotions and have potential to express feelings and emotions.

(ii) Assessment of others' emotions relates to the abilities of people to understand and observe the feelings and emotions around them.

(iii) Use of emotion: an individual can control and use feelings and emotions on the job or work (Supriyanto, 2018).

Past studies have addressed and explored the relationship between EI and IWB from different knowledge domains. The mechanism between innovation and emotions has been taken theoretically. The research studies concluded that positive emotions create positive impacts, broaden humans' minds and make their resourcefulness. Researchers support the concept that positive emotion can inspire one's and others to expand and explore new ideas and information. The studies verified that humans with a high level of EI could be more innovative and found to have more positive emotions. Hu and He (2018) explored the other ways that linked EI with employees' IWB. They argued that the intrinsic theory of motivation affects the birth of new thoughts, ideas, and application of concepts, where the extrinsic theory of motivation influences the practical part of the motivation. Moreover, EI strongly connects with the theory of motivation.

2.2 Proposition of EI, KCA, and IWB

Figure 2 shows the relationship of emotional intelligence and KCA with IWB. This proposition was in line with the original principles for emotional intelligence from earlier investigations. According to Hu and He (2018), emotional intelligence competency has been considered one of the important antecedent managers of companies and organizations with high EI are well-focused, employee-oriented, promoting good relationships, and it is the key element for stimulating employee IWB. Sparks (2021) that studied on 306 engineers
belonging to professional companies and organizations in USA and checked the correlation between EI and IWB. The results concluded that EI was a positive and significant predictor of IWB.

The knowledge-based companies developed an effective way to increase employee's knowledge through knowledge conversion and transfer (Sousa-Ginel et al., 2021). Companies keep looking to faster the process and experience the transfer and conversion of knowledge effectively and efficiently that depends on a set of emotional and technical competencies. The highly technical expert's employees EI level forecast leadership skills, problem-solving, guide to convert tacit knowledge to peers.

3.0 Cultural Intelligence (CI)
CI is the competency that commonly exists when employees belongs from different cultural backgrounds work together. CQ is defined as “an individual’s capability to function and manage effectively in culturally diverse settings” (Wang & Goh; 2020). Organization Culture (OC) is explained as a dominant factor in the growth of an organization (Ott & Michailova, 2023), problem resolve competencies (Nonaka, 1994), improving organizational abilities, and resolving barriers or setting the ground to achieve organizational aims and objectives. By the time employees from different backgrounds understand the OC, it helps them move and act according to their needs and demands. The employees with high CI have a better chance to understand OC and play a leading role in organization development.

CI theories and experiential research have derived from four dimensions. Meta-cognitive CI possesses the highest cognitive processes that understand and contain cultural knowledge. Cognitive CI shows knowledge of standards, conventions, practices, economic, social and legal system, basic understanding about other cultures can be obtained through formal experience and formal education (Chin et al., 2022). Motivational CI refers to the capacity with energy and attention to learn and function well in undefined situations that cause by difference in cultures. Behavioural CI refers to the capability of transmitting verbal and non-verbal actions appropriately when interacting with different multi-diverse cultures.

3.1 Proposition of CI, KCA and IWB
Prior research reported that culture quotient (CQ) could endorse IWB in cross-culture employees because CQ enhances cognitive flexibility. CI is one of the factors that shape individual innovative behaviour. People who live in their own culture and have less interest in a multicultural environment can face difficulty switching rapidly and accepting other cultures. People with such attributes feel more discomfort; it negatively affects innovative behaviour (Abdullah et al., 2021). The literature showed that CI positively affects employees IWB.

Cultural intelligence is a critical factor that affects behaviour. Tseng (2010) conducted a study to check the correlation between organizational cultures on employee’s knowledge conversion ability. The researcher restricted the sample to Taiwanese corporations, from which 650 participants were selected. Results depicted that organizations enable knowledge conversion and improve work performance.

4.0 Knowledge Conversion Abilities
Knowledge is an essential resource acquired by any organization to maintain a competitive advantage in the marketplace. Knowledge mainly lies in between the minds of employees, suppliers, customers, and documents that maintain organizations' routines. Knowledge is defined as personal understanding and experience. Organizational knowledge creation is intensifying and available knowledge by individual employers and connecting to the organizational knowledge system (Nonaka, 1994). Researchers have classified the domain of knowledge into two categories, where Nonaka has first divided knowledge into two categories (1) tacit and (2) explicit (Nonaka & Krog, 2009).

Tacit knowledge explains as individual perspective, emotions, experience, beliefs, intuition, expertise and values. An intangible knowledge is not easy to share with others and articulate. Explicit knowledge can be expressed and obtained in the textual and numerical form; it can be transfer knowledge in the form of lectures from data, self-studies of books, manuals, scientific and technical language, and so on (Nonaka, 1994).

4.1 SECI Model (Socialization, Externalization, Combination, and Internalization)
The SECI model consists of four dimensions. Socialization is about to transfer of tacit to new tacit knowledge. The conversion process of tacit knowledge into explicit knowledge is categorized as externalization. In the combination, explicit knowledge transfers into the complex set of same new explicit knowledge. This outcome comes when the explicit knowledge converts into implicit knowledge. Internalization is the convergence of explicit knowledge into tacit knowledge. The result of the transformation brings new explicit knowledge. KCA is a process that has a strong interrelationship between tacit and explicit knowledge. It exists within the boundaries of knowledge creation, which connect socialization, externalization, combination, and internalization. The conversion of knowledge from tacit to explicit makes the SECI model unique because implicit and hidden knowledge is tough to articulate.

4.2 Proposition of KCA and IWB
Researchers have explored the relationship between KCA and IWB to create a competitive advantage in the marketplace (Masrek et al., 2014). Researchers have adopted SECI Nonaka knowledge conversion model and test with different innovative work models. Researchers argued that the process of knowledge creation and conversion is to develop innovative products, processes and services. The primary purpose of innovation is to strengthen the knowledge creation procedure (Nonaka, 1994). A total of 328 diplomatic offices...
and administrative personnel were selected, and the study results concluded that Nonaka's four SECI dimensions significantly correlate with Innovation (Masrek et al., 2014). Jing (2006) selected 124 employees from different advertising teams to check knowledge conversion capability's role with IWB. The results showed that knowledge conversion capability positively relates to IWB of marketing team. A study conducted on frontline employees working in 4-5 star hotels to check relationship between knowledge conversion and IWB. The result indicated statistically significant relation found between knowledge conversion and IWB (İşik et al., 2021).

5.0 Innovative Work Behaviour
Innovation has been a constant need since the beginning of humanity. The author argued that IWB is defined as offering a new problem-solving technique or application that identifies error or problem, solves problems, and instigates the solution (Malik, 2022). Research studies argued that innovation is different from creativity, which comprises creating and discovering original ideas (Afsar et al., 2020). Innovation starts from the point of creativity. It involves developing an original idea, where IWB develops a series that involves introduction, adoption, development, implementation, and modification of the present idea (Malik, 2022).

Previous studies depicted that IWB is a process. Some authors divided the process into three dimensions, whereas others divided it into four dimensions. Janssen et al. (2004) defined 4 dimensions as (i) idea creation, (ii) idea promotion and (iii) idea implementation. Four dimensions are defined as (1) idea exploration, (2) idea generation, (3) idea championing, and (4) idea application/implementation De Jong & Den Hartog, 2010).

![Fig. 1: Conceptual Framework](image)

6.0 Findings
This study is unique and fills the literature gap as it proposed a new model on innovative work behavior. It is based on three variables (EI, CI, and KCA). There was a list of variables in the literature that has impacted on IWB but the current model proposed the relationship of two most influenced variables (EI and CI) that have strong relation with IWB. The model sketched that EI and CI have direct impact on IWB and this impact is positive. Moreover, the current proposed model of study also claimed that the relationship between EI and IWB is mediated by KCA. Likewise, the relationship between CI and IWB is mediated by KCA as well.

A testable conceptual framework offered in the study provides an opportunity for the researchers to investigate further the relationship of cultural intelligence, emotional intelligence, and knowledge conversion capability with innovative work behavior through various research settings and designs. From the theoretical standpoint, the study highlights the importance of IWB that affects human's KCA, EI and CI variables. The proposed model should be interested in either corporate or academic respondents. For the corporate community, they can extend and enhance the businesses by checking their employee's IWB. For the academic community, institutional employees play a vital role in institutional effectiveness and improving educational research. The find on such a conceptual model can be helpful for universities, organizations and corporate administration, professionals, and government education bodies as it explores the dimensions of all three attributes that strengthen or weaken the IWB. This study can provide a baseline for local and international researchers.

7.0 Discussion
EI and CI as a type of social intelligence (SI), where EI involves and deals with the abilities to control other's and one's own emotions, to differentiate among them, that helps to identify one's thinking and actions and CI an individual's capability to function and manage effectively in culturally diverse settings (Wang & Goh, 2020). Previous research explored the relationship between KCA and IWB to create a competitive advantage in the marketplace and found statistically significant relationship between knowledge conversion and IWB (İşik et al., 2021; Masrek et al., 2014). EI and CI variables dimensions relationship with knowledge conversion and IWB was also
studied and found positively affects employees IWB (Afsar et al., 2020; Chin et al., 2022). These studies indicate that employees IWB needs to measure with proposed independent variables to generate new ideas and innovation. In general, research indicates that CI, EI, and KCAs are crucial elements that influence innovative work behaviour. Organizations can improve innovation by comprehending these factors and implementing appropriate interventions.

8.0 Recommendation for Improving the Situation
The practical situation of this research model lies in its potential to inform and guide the practice of academics, cooperate and organization employees. Understanding how employees perceive their innovative work behaviour, knowledge conversion abilities, emotional intelligence, and cultural intelligence is crucial for developing effective strategies and interventions to enhance their professional performance. The proposed mode will offer practical insights for academic institutions, organization administrators, and policymakers to design targeted training programs, professional development initiatives, and interventions that foster innovation and improve the quality and output of employees.

9.0 Research Limitation
The proposed research study develop a conceptual model by consulting research literature indexed in three mainstream databases: Scopus, Google Scholar, and Web of Science. Whereas, other databases did not consult.

10.0 Further proposed studies directions
The research conceptual framework proposed new domain of knowledge to consider unidentified and un-checked combined effect of CI, EI, and KCA influence on IWB by obtain different industrial, academic and organization unit of analysis. By analysis of conceptual framework in different organizations can develop interventions that can improve employees IWB.

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Paper Contribution to Related Field of Study
The study aims to identify and extend the contribution of human competencies and abilities towards innovation, which is part of the social science field.

References

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