

# Need for Cognitive Closure And Lifelong Learning Among Young Adults

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## Abstract

This study explores the relationship between the Need for Cognitive Closure (NFC) and Lifelong Learning (LL) among young adults in India. Drawing on a sample of 102 participants aged 18 to 25, data was collected using standardized questionnaires. The findings reveal a significant negative correlation between Need for Cognitive Closure and Lifelong Learning, suggesting that a decrease in Need for Cognitive Closure is associated with an increase in Lifelong Learning tendencies. Linear regression analysis further confirms this relationship, indicating that Need for Cognitive Closure negatively influences Lifelong Learning. These results underscore the importance of fostering cognitive flexibility and open-mindedness to promote lifelong learning engagement among young adults.

**Keywords:** Lifelong Learning, Need for Cognitive Closure

## Introduction

In the past decade, a notable emphasis on lifelong learning has been drawn as a critical aspect leading to its widespread recognition. In 2015, the United Nations delineated 17 Sustainable Development Goals (SDGs) with the overarching objective of achieving them by 2030. Notably, the fourth goal places a central focus on quality education and the prioritization of promoting lifelong learning opportunities for all. UNESCO envisions lifelong learning as a fundamental principle shaping a democratic learning society, underpinned by humanistic philosophy (Elfert, M., 2019).

Lifelong learning as a construct can be explored from multiple lenses. It has widely been explored from social and individual standpoints. On similar lines as UNESCO, Longworth (2003) emphasizes a social perspective highlighting the importance of lifelong learning to push forth the economic, social, and cultural dynamics to ensure a stable and adaptive society. The individual standpoint views lifelong learning as a mental practice that enables people to adapt to their ever-changing environments on personal and professional levels. It can be defined as “a concept that involves a set of self-initiated activities and information-seeking skills that are activated in individuals with a sustained motivation to learn and the ability to recognize their own learning needs” (Hojat, M., et al., 2006). Lifelong learning is characterized by the voluntary pursuit of knowledge driven by individual interests, passions, and intrinsic motivation (Merriam et al., 2007). Its key characteristics include voluntary engagement driven by intrinsic motivation, adaptability to change, diverse learning settings, and the integration of informal and formal learning experiences (Tight, 2012). Learning to know, learning to do, learning to live together, and learning to be, reflect the holistic nature of lifelong learning (Laal, 2010).

The need for cognitive closure (NFC) refers to an individual's desire for a firm answer to a question and an aversion toward ambiguity (Kruglanski, 1989). It is a psychological construct that describes an individual's preference for clear, definitive, and unambiguous knowledge over uncertainty (Kruglanski, 2004)

According to research, individuals with a high need for cognitive closure tend to seize on the first available information that provides a sense of certainty, and then freeze on that information, resisting any further information that might contradict or complicate their initial understanding (Kruglanski, 1989; 2004). This can lead to a more rigid and closed-minded thinking style, as well as a tendency to make quick judgments and decisions without considering alternative perspectives (Kruglanski, 2004).

In contrast, individuals with a low need for cognitive closure are more comfortable with ambiguity and uncertainty, and are more open to considering multiple perspectives and alternative solutions (Kruglanski, 1989). They are less likely to jump to conclusions and more willing to engage in deeper, more nuanced thinking (Kruglanski, 2004).

The need for cognitive closure has been linked to various cognitive and behavioral outcomes, such as information search strategies, decision-making, and creative performance (García-Ramírez & Hazir, 2015; Sankaran, et al. 2017; Webster & Kruglanski, 1994). According to Sankaran, et al. (2017) individuals with a high need for cognitive closure tend to prefer attribute-based information search strategies, which focus on specific, concrete details, rather than more holistic, category-based search strategies. Furthermore Webster & Kruglanski, (1994) state that these individuals also tend to perform better on tasks that require convergent thinking, but may struggle with tasks that require divergent, creative thinking. The need for cognitive closure is an important individual difference variable that can have significant implications for how individuals process information, make decisions, and engage with the world around them (Kruglanski, 2004).

Exploring how need for cognitive closure relates to the educational set-ups, DeBacker & Crowson (2009) found that NFC can influence group interactions and dynamics in the classroom. Individuals with high NFC tend to prefer more structured and directive teaching approaches, as they are averse to ambiguity and seek clear, definitive answers. Studies have found a correlation between NFC and narrative creativity in adolescents, with high NFC individuals tending to perform better on convergent thinking tasks but struggling with more divergent, creative thinking (Ortega-Martín, et al., 2021). Walkiewicz, Zalewski, & Guziak (2022) found that level of an individual's efficacy in fulfilling their need for closure can impact their learning experiences. High NFC students may benefit from instructional approaches that provide clear structure and minimize ambiguity. NFC can impede the effectiveness of epistemic belief instruction, as individuals with high NFC are less receptive to information that challenges their existing beliefs and understanding (Rosman et al, 2016). Furthermore, Parris et al. (2023) in their study concluded that a higher level of NFC is negatively related to prosocial behavior in high school students. This may be due to the tendency of high NFC individuals to be more rigid and closed-minded, which can hinder their ability to empathize and cooperate with others.

This study seeks to investigate the relationship between the Need for Cognitive Closure and Lifelong Learning among young adults, drawing upon theoretical frameworks from cognitive psychology and educational psychology. The cognitive flexibility theory posits that individuals differ in their cognitive styles, with some exhibiting a greater propensity for cognitive closure, characterized by a preference for certainty and aversion to ambiguity, while others demonstrate a more open-minded approach, conducive to lifelong learning (Kruglanski, 1989; Cha et al., 2024). Understanding the interplay between NFC and

LL is crucial within the context of contemporary educational paradigms, which increasingly emphasize the cultivation of lifelong learning skills to navigate complex, rapidly changing environments (UNESCO, 2015). By elucidating how individual differences in cognitive closure impact lifelong learning tendencies, this study contributes to theoretical insights into cognitive processing and has practical implications for educational interventions aimed at promoting adaptive learning behaviors. This research is particularly salient in the Indian context, where rapid socio-economic transformations underscore the need for individuals to continually update their skills and knowledge to remain competitive in the globalized workforce. By elucidating the cognitive mechanisms underlying lifelong learning, this study aims to inform educational policies and practices that foster a culture of intellectual curiosity and facilitate lifelong learning among young adults in India and beyond.

This study addresses a significant gap in the literature by investigating the relationship between NFC and LL among young adults, informed by theoretical perspectives from cognitive and educational psychology. The findings of this research have the potential to inform educational policies and practices aimed at promoting lifelong learning skills in diverse socio-cultural contexts.

## Method

### Participants

As the study focused on understanding the dynamics of the need for cognitive closure and Lifelong Learning, the population of individuals ranging between the age group of 18 to 25 years was included. The inclusion criteria required the participants to have enrolled in or completed their undergraduate degree. The exclusion criteria demanded to exclude individuals suffering from any acute or chronic mental health condition. A non-probability convenient sampling was used and a sample of 106 was collected. This data was trimmed in accordance with the inclusion and exclusion criteria. The data was collected from college and university campuses in Bengaluru, India. Additionally, digital media, specifically Google Forms, were employed for online data collection. The final study included data from 102 participants of which students 60 were pursuing their undergraduate degree, 42 participants were pursuing their post-graduate degree. 47 participants identified as females, 53 identified as males, and 2 identified as transgender. The calculated mean age of the participants was 22.4.

### Objectives

1. To explore the relationship between Need for Cognitive Closure and Lifelong Learning.
2. To explore if Need for Cognitive Closure impacts Lifelong Learning.

### Hypothesis

H<sub>01</sub> : There is no significant relationship between Need for Cognitive Closure and Lifelong Learning.

H<sub>02</sub> : Need for Cognitive Closure does not have an impact on Lifelong Learning.

### Tools:

Three questionnaires were used to collect data from the participants. The first questionnaire included a section for informed consent and demographic details of the participants. Demographic details like an identification code (e.g. a proxy name or initials), gender, age, educational qualifications, field of education, profession (if applicable) and socio-economic status were collected via this form. The form also highlighted the inclusion and exclusion criteria. The other two forms included standardized question-

naires viz.:

**Lifelong Learning Scale:** The 2nd questionnaire consisted of the Lifelong Learning Scale (Kirby et. al., 2010). The 14-item LLS is a unidimensional scale that measures the extent to which the person reports positive behaviors and attitudes associated with 5 components viz. goal setting, application of knowledge and skills, self-direction and evaluation, locating information and adaptable learning strategies. Each item is rated on a scale of 1 (never) to 5 (always or daily) and items 1, 2, 4, 6, 8, 11 and 14 are negatively scored. The reported alpha coefficient was .71. The lowest possible score was 1 and the highest was 70.

**Need for Closure Scale (short form):** The 3rd questionnaire was administered to measure the Need for closure of the participants. The long form of NFC, a 41-item measure was developed by Webster and Kruglanski (1994) and further revised by Roets & Van Heil, (2007). This was further made into a short form consisting of the 15-items (3 items per facet) (Roets & Hiel, 2011) which was used for this study. Each item was marked on a scale of 1 (completely disagree) to 6 (completely agree) measured aspects like, need for order, need for predictability, decisiveness, avoidance of ambiguity, and close-mindedness. The evaluated Chronbach's alpha values of the short version were similar to that of the long form were reported to be .84 and the subsets ranged between .62 and .82.

### **Ethical Considerations:**

Informed consent was obtained from all participants before they participated in the study. Participants were provided with detailed information about the research, including its purpose, procedures, potential risks, and benefits. They were assured that participation was voluntary, and they could withdraw at any point without repercussions. Participant confidentiality was maintained throughout the study. All data were anonymized, and identifying information was securely stored separately from the research data, and measures were taken to ensure that participants could not be identified. Participants were provided with contact information for the principal investigator, and they were encouraged to reach out if they had any questions or concerns about the study.

### **Statistical Analysis:**

Data analysis procedures were conducted using a combination of software. The data was cleaned and sorted using Microsoft Excel 2019. Further, the descriptive statistics zero-order correlations and linear regression were calculated using the Statistical Package for Social Sciences (SPSS) version 27. The significance of the indirect effects was determined by whether zero fell within the confidence interval.

### **Results**

The aim of the present study was to explore the relationship between NFC and Lifelong Learning. It further aimed to understand if Lifelong Learning is impacted by the Need for Cognitive Closure. In order to analyze these relationships, data collected from a sample of 102 individuals was analyzed using the Statistical Package for Social Sciences (SPSS) version 27. The results of these analyses are presented herewith.

**Table 1: Descriptive Statistics showing Mean and Standard Deviation values of the participants' data**

	N	Maximum	Minimum	Mean	Std. Deviation
<b>Need for Cognitive Closure</b>	102	20.00	85.00	59.46	11.77
<b>Lifelong Learning</b>	102	31.00	58.00	44.58	5.33

Table 1 demonstrates varying means and standard deviations in the sample. The mean score for the need for cognitive closure was  $M = 59.46$  ( $SD = 11.77$ ) and the lowest obtained score within the sample on the Need for cognitive Closure (short version) scale (Roets & Van Hiel, 2011) was 20 and the highest obtained score was 85, indicating higher levels of NFC in the sample. Lifelong learning had a mean score of  $M = 44.58$  ( $SD = 5.33$ ) and the highest obtained score on the Lifelong Learning Scale (Kirby, 2010) within this sample was 58 and the lowest obtained score was 31 indicating average level of this behaviour among the sample. These results suggest varying levels of beliefs and attitudes that were relevant to the study, within the sample.

**Table 2: Pearson Correlation Matrix between the Need for Cognitive Closure and Lifelong Learning**

	Lifelong Learning	Need For Cognitive Closure
<b>Lifelong Learning</b>	1	
<b>Need For Cognitive Closure</b>	-.240*	1

**Note:** \* $p < 0.05$

Table 2 presents the correlation coefficients between lifelong learning and need for cognitive closure. The results indicates that hypothesis  $H_{01}$ , stating that there is no significant relationship between Need for cognitive closure (NFC) and Lifelong Learning (LL), is rejected ( $r = -0.240$ ,  $p < 0.05$ ), supporting the presence of a negative correlation. This implies that, there exists a significant albeit weak and negative correlation between lifelong learning and need for cognitive closure. It signifies that a decrease in the need for closure could lead to an increase in lifelong learning.

Independent Variable	$\beta$	SE	Statistics		
			Standardized Beta	t-value	Model Summary
<b>Constant</b>	51.06	2.665		19.160	
<b>Need for Cognitive Closure</b>	-.109	0.044	-.240	-2.477	R Square = .058 F = 6.138 Sig < .015

**Table 3: Linear regression analysis to assess the impact of NFC on Lifelong learning**

**Note:**  $p < 0.05^*$ , Dependent Variable – Lifelong Learning

The results of the linear regression analysis, as demonstrated in table 3, revealed a statistically significant negative relationship between need for cognitive closure and lifelong learning ( $\beta = -.109$ ,  $p = 0.015$ ). The

adjusted  $R^2$  indicated that the model accounted for 5.8% of the variance in lifelong learning scores. This indicated that  $H_0$  stating that need for cognitive closure does not significantly influence Lifelong Learning is rejected. Indicating that need for cognitive closure influences lifelong learning in a negative fashion.

## Discussion

The present study aimed to examine if the need for cognitive closure impacts lifelong learning among young adults in India. The study followed a quantitative research design and a descriptive format. The analysis of these variables among 102 indicated a negative relationship between need for cognitive closure and lifelong learning. It further highlighted that there existed a statistically significant impact of need for cognitive closure on lifelong learning.

The study conducted by Ortega-Martín, et al., (2021) studied narrative creativity and the need for cognitive closure among secondary school participants. The study noted that individuals with a high NFC desire definitive answers, avoid ambiguity, and are less open to new information that could change their existing beliefs (Ortega-Martín, et al., 2021). In contrast, lifelong learning requires metacognitive skills, curiosity, and a willingness to continuously acquire new knowledge and skills (Cha, et al., 2024; Ortega-Martín, et al., 2021). These studies fall in line with the present studies' findings indicating that the need for cognitive closure could negatively affect individuals' lifelong learning tendencies. These findings also provide further evidence to support to studies conducted by Schommer-Aikins & Easter (2018) that predicted the relationship between NFC and self-directed learning, which was an essential component of lifelong learning (Kirby, 2010). High NFC individuals often prioritize efficiency over depth in their learning. They tend to seek quick and definitive answers, which can lead them to focus on surface-level understanding rather than delving deeper into complex topics (Acciarino, 2018).

Although, contrary to the present findings, Individuals with a moderate level of cognitive closure can make decisions efficiently and maintain stability in their knowledge base, which can be advantageous in situations requiring quick judgments (Atak, Syed, & Çok, 2017). These findings partially align with previous research suggesting a complex relationship between NFC and learning. While some studies suggest that NFC can lead to deeper information processing under certain conditions (DeBacker & Crowson, 2009), others highlight the potential drawbacks, such as a tendency to prematurely accept information and resist seeking out new perspectives (Harlow, DeBacker, & Crowson, 2011). Our results support the latter notion, suggesting that a strong need for closure may hinder the ongoing learning process characteristic of lifelong learning. Individuals with a high NFC may prioritize achieving definitive answers and view learning as a means to that end. Once they feel they have a grasp on a concept, they may be less motivated to seek out new information or challenge their existing understanding (Webster & Kruglanski, 1994). This can be detrimental for lifelong learning, which requires continuous engagement with new knowledge and perspectives.

Although, the relatively low regression and correlation values in the present study indicates that NFC explains only a small portion of the variance in lifelong learning. Other factors, such as personality traits, learning styles, and access to learning opportunities, likely play a significant role. Future research could explore these mediators to gain a more nuanced understanding of how NFC interacts with other variables to influence lifelong learning engagement. By highlighting the potential negative impact of a strong need for cognitive closure, this study underscores the importance of fostering open-mindedness and a continuous pursuit of knowledge throughout life.

The implications of this study extend to educational institutions, workplace training programs, and lifelong learning initiatives, where interventions aimed at promoting cognitive flexibility, critical thinking skills, and a culture of intellectual curiosity can enhance individuals' readiness to engage in lifelong learning. However, several limitations, including reliance on self-reported measures and the cross-sectional design, warrant a cautious interpretation of the findings and underscore the need for future research.

### Conclusion:

In conclusion, this study contributes to the growing body of literature on lifelong learning by examining the role of NFC in shaping learning attitudes and behaviors among young adults. The findings highlight the detrimental impact of a strong need for cognitive closure on lifelong learning, emphasizing the importance of promoting cognitive flexibility and open-mindedness in educational and workplace settings. While the study provides valuable insights, it is essential to acknowledge its limitations, including reliance on self-reported measures and the cross-sectional design. Future research should explore additional factors that may moderate the relationship between NFC and LL to provide a more comprehensive understanding of lifelong learning engagement. Ultimately, by fostering a culture of intellectual curiosity and continuous learning, educational institutions and workplace training programs can empower individuals to thrive in an ever-changing world.

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