

Factors Influencing Lifelong Learning Among Retirees in Guangdong Province, People's Republic of China

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Abstract

This study investigated the factors influencing lifelong learning among retirees in Guangdong Province, People's Republic of China. The objectives were to: 1) examine the levels of factors influencing lifelong learning; 2) assess the level of lifelong learning; and 3) analyze the predictive power of those factors on lifelong learning. Data were collected from 384 retirees using a structured questionnaire and analyzed using mean ($\bar{x}$), standard deviation (S.D.), and stepwise multiple regression analysis.

The findings indicated that:

1) both the overall and sub-dimension levels of factors influencing lifelong learning were high, with the learner factor yielding the highest mean score

2) overall lifelong learning was likewise at a high level, with the attitude toward learning dimension scoring highest, while communication ability scored lowest

3) the learner ($\beta = 0.312$), family ($\beta = 0.262$), and institutional ($\beta = 0.238$) factors together significantly predicted lifelong learning at the .01 level, jointly accounting for 68.00% of the variance ($R^2 = 0.680$). Based on these findings, the study proposes the G-L³ Model (Guangdong Lifelong Learning through Three-Pillar Synergy), which asserts that sustainable lifelong learning requires the integrated support of personal motivation, family engagement, and institutional facilitation to bridge the digital communication skills gap faced by retirees

Keywords: Lifelong Learning; Influencing Factors; Retirees; Stepwise Multiple Regression; Guangdong Province; China

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Introduction

Over the past several decades, the world has experienced a significant demographic transition toward an ageing society. China is among the countries most profoundly affected by this shift. As one of China's most populous and economically developed regions, Guangdong Province has seen the proportion of residents aged 60 and above grow steadily, creating pressing challenges for social welfare, healthcare, and education policy (Wu & Jiang, 2025). Across the world, many governments have reformed their social welfare systems and retirement policies to address demographic changes by raising the official retirement age to alleviate long-term financial pressures and maintain a healthy balance among their working-age populations. These strategies have existed since the nineteenth century and are now normal in many countries, such as the United Kingdom, Singapore, South Korea, and Japan. In these countries, such policies play a crucial role in helping retirees continue working and remain financially independent. As the world is well known now, people are living longer than before due to improved healthcare.

Within this context, lifelong learning has emerged as a key strategy for national development. It is no longer merely an optional concept but is viewed as a vital driver for the growth and adaptation of 21st-century citizens. Research on learning in later life shows that older adults are motivated not only by economic needs but also by social connection and personal fulfillment (Dench & Regan, 2000). Unlike traditional education, which focused on formal schooling during adolescence, modern learning is a continuous, evolving journey that enables individuals to respond to a changing economy, evolving social norms, and rapidly advancing technology. Lifelong learning in later life is increasingly viewed as a structured field of practice that supports older adults' social participation, identity, and well-being (Formosa, 2014). When lifelong learning becomes part of the culture of many nations, it will enhance the overall quality of the workforce and make those nations stronger and more competitive in the long term (Li, 2025).

In line with this shift, numerous countries have formulated strategies to advance lifelong learning within their specific social and economic contexts. For example, the United Kingdom has integrated education into daily community life, while Canada has

emphasized accessibility at every life stage. In China, the government has actively promoted lifelong learning through continuing education policies, university-based elder learning programs, and community learning centres, particularly in urbanized provinces such as Guangdong (Li, 2025). These initiatives reflect a broader international movement to build inclusive systems of older adult education and later-life learning (Formosa, 2014), and they underscore the need to understand the specific factors that shape lifelong learning engagement among retirees in Guangdong

Research Objectives

1. To examine the levels of factors influencing lifelong learning of the retirees in Guangdong Province.
2. To investigate the level of lifelong learning of the retirees in Guangdong Province.
3. To analyze the predictive power of the influencing factors on lifelong learning of the retirees in Guangdong Province.

Research Methodology

1. Population and Sample

The population comprised retirees aged 60 years and above living in Guangdong Province and enrolled in organized learning activities. A sample of 384 individuals was determined using the Krejcie and Morgan (1970) table and selected through multistage sampling: first, three cities in Guangdong were selected to represent urban, suburban, and rural settings; second, learning centres or community sites within each city were identified; and third, individual participants were recruited from those sites using systematic random sampling

2. Research Instrument

Data were collected using a structured questionnaire with four sections. The first section covered demographic characteristics (e.g., gender, age, education). The second measured ten sub-dimensions across three factors: institutional (classroom atmosphere, learner–teacher and learner–peer relationships, learner-centred instruction), family

(family support and learner-family relationships), and learner (locus of control, future orientation, self-esteem, self-awareness). The third section assessed lifelong learning in five aspects: attitude toward learning, learning motivation, learning capacity, self-directed knowledge-seeking, and communication competence, using a five-point Likert scale

3. Quality of Research Instruments

Five experts evaluated content validity, yielding an Index of Item-Objective Congruence of 1.00. A pilot test with 30 retirees from a community learning centre in Sichuan Province (selected as a comparable retirement population outside the study area to avoid contaminating the main sample) produced a Cronbach's alpha (α) of 0.963, indicating excellent reliability

4. Data Analysis

Demographic data were analyzed using frequencies and percentages. Levels of influencing factors and lifelong learning were analyzed using mean ($\bar{x}$) and standard deviation (S.D.), reported overall and by dimension. Stepwise multiple regression analysis was employed to identify significant predictors of lifelong learning and estimate their relative contributions. This method was chosen because it allows variables to enter the model based on their statistical significance, making it appropriate when the researcher seeks to determine which among several correlated factors contribute most strongly to the outcome

Results

1. Factors Affecting Lifelong Learning

The survey results, including the mean scores, standard deviations, and overall levels of the three factors influencing lifelong learning among the retirees, are presented in Table 1 below.

Table 1 Mean Scores, Standard Deviations, and Levels of Factors Affecting Lifelong Learning of Retirees in Guangdong Province, China (Overall)

No.	Factors Affecting Lifelong Learning of Retirees	$\bar{X}$	S.D.	Level	Rank
1	Institutional Factor	4.01	0.47	High	3
2	Family Factor	4.45	0.51	High	2
3	Learner Factor	4.48	0.49	High	1
	Overall Mean	4.31	0.48	High	

Table 1 demonstrates that the overall level of factors influencing lifelong learning among retirees in Guangdong Province was rated as high, with a mean score of 4.31 and a standard deviation of 0.48. Additionally, all three examined dimensions showed similarly high mean scores, with the learner-related factor having the highest ($\bar{x} = 4.48$), followed by the family factor ($\bar{x} = 4.45$), both of which were still in the high range. The factor with the lowest mean score was the institutional factor ($\bar{x} = 4.01$).

2. Lifelong Learning Levels

Research results of mean scores, standard deviations, and levels of lifelong learning across the five dimensions' measures are presented in Table 2 below.

Table 2 Mean Scores, Standard Deviations, and Levels of Lifelong Learning of Retirees in Guangdong Province, China (Overall)

No.	Lifelong Learning Dimensions	$\bar{x}$	S.D.	Level	Rank
1	Attitude toward learning	4.22	0.50	High	1
2	Learning motivation	3.98	0.57	High	4
3	Learning ability	4.11	0.59	High	2
4	Self-directed knowledge-seeking skills	4.00	0.69	High	3
5	Communication ability	3.92	0.64	High	5
	Overall Mean	4.04	0.47	High	

Table 2 indicates that the overall level of lifelong learning was rated as high ($\bar{x} = 4.04$, S.D. = 0.47), with all five dimensions also falling within the high range. Among these dimensions, the average score for the attitude towards learning factor was the highest ($\bar{x} = 4.22$), followed by the learning ability factor ($\bar{x} = 4.11$). Although communication ability was also at a high level, it had the lowest average score among the five dimensions ($\bar{x} = 3.92$).

3. Predictive Power of Factors on Lifelong Learning

Table 3 presents the results of the stepwise multiple regression analysis, including the regression coefficients for each factor used in the predictive model.

Table 3 Stepwise Multiple Regression Analysis: Factors Predicting Lifelong Learning of Retirees in Guangdong Province, China

No.	Predictor Variable	R ²	b	β	t	p
	Constant		0.582	—	3.960	.000*
1	Institutional Factor	0.586	0.202	0.238	3.809	.000*
2	Family Factor	0.646	0.310	0.262	6.800	.000*
3	Learner Factor	0.676	0.242	0.312	5.077	.000*
R = 0.825 R ² = 0.680 SEest = 0.300 * p < .01						

Stepwise multiple regression analysis identified three significant positive predictors of lifelong learning: institutional factors, family factors, and learner factors. Overall, these variables accounted for 68.00% of the variance in lifelong learning ($R^2 = 0.680$), with all three associations statistically significant at the .01 level

Discussion

1. Factors Affecting Lifelong Learning

The finding that all three factor domains were rated high, with learner factors emerging as the strongest, suggests that retirees in Guangdong are internally motivated and personally invested in their own learning a pattern that aligns with what one might expect given that retirement frees individuals to pursue personally meaningful activities. This result is interpretively significant: it indicates that any policy aimed at promoting lifelong learning should first strengthen individual agency, self-esteem, and learning readiness, as these are the foundation upon which family and institutional supports become effective (Knowles, 1980; Rattanaubol, 2011). The secondary importance of family factors ranked above institutional factors reflects the specific cultural dynamics of Guangdong, where familial relationships remain central to daily life and where encouragement from children and grandchildren may serve as a powerful motivational anchor (Chen, 2016). This finding implies that family-inclusive programming may be more cost-effective than purely institutional interventions in this context. The relatively lower

mean of the institutional factor, while still high, signals that learning environments and educator learner dynamics in Guangdong's elder learning programmes have room for improvement and should not be treated as automatically satisfactory.

2. Lifelong Learning Levels

The most practically significant finding in this dimension is the gap between retirees' strong attitudes toward learning (highest-rated dimension, $\bar{x} = 4.22$) and their comparatively weaker communication ability (lowest-rated, $\bar{x} = 3.92$). This discrepancy suggests that motivation alone is insufficient retirees in Guangdong are willing to learn but face structural barriers in communication, particularly in digital environments. This pattern is consistent with findings on technology-related exclusion among older adults in Asian contexts (Jarongkiatkul, 2018; Selwyn, 2004) and resonates with the WHO (2002) active ageing framework, which identifies communication capacity as essential for full social participation. It should be noted that Ine (2026), cited in this context, is an arXiv preprint and has not yet undergone peer review; its findings should therefore be treated with appropriate caution and verified against established literature. Programmatically, these results call for a shift from attitude-building (already strong) toward skills-building particularly digital communication skills as the urgent priority for lifelong learning provision in Guangdong.

3. Predictive Power of Factors

The stepwise regression results, which show that learner, family, and institutional factors together account for 68% of the variance in lifelong learning ($R^2 = 0.680$), represent a theoretically meaningful finding: no single factor alone determines learning engagement rather, it is their synergy that matters. The primacy of the learner factor ($\beta = 0.312$) confirms that internal readiness is the necessary precondition; without self-directedness and positive self-concept, external support from family or institutions yields limited impact (Knowles, 1980). However, the substantial contribution of family ($\beta = 0.262$) in a Chinese cultural context deserves particular emphasis: it is not merely a background condition but an active predictor, suggesting that family members function as informal learning facilitators. The institutional factor ($\beta = 0.238$), though the smallest

of the three, remains statistically significant, indicating that access to age-appropriate learning environments and peer relationships continues to matter even when learner and family motivation are strong a finding that aligns with ecological theories of adult development (Bronfenbrenner, 1979).

New Knowledge Contribution: The G-L³ Model

The G-L³ Model (Guangdong Lifelong Learning through Three-Pillar Synergy) represents this study's primary theoretical contribution. While existing frameworks such as Bronfenbrenner's (1979) ecological model and Knowles's (1980) andragogical theory provide general principles for adult learning, neither was developed with the specific context of Chinese retirees in mind. The G-L³ Model addresses this gap by integrating empirical evidence from Guangdong into a culturally grounded, evidence-based framework. Its theoretical significance lies in three respects: first, it reconceptualises lifelong learning among older adults as a product of multi-level synergy rather than individual agency alone; second, it explicitly positions family an undertheorised construct in Western lifelong learning literature as a co-equal pillar of sustainable learning; and third, it introduces the Attitude–Skill Paradox as a theoretically distinct phenomenon warranting further scholarly attention. The model describes lifelong learning among Guangdong retirees as arising from the integrated influence of learner, family, and institutional factors, organised around four interrelated propositions:

1. Tri Pillar Synergy: Lifelong learning among retirees in Guangdong Province arises from the interaction of three pillars: learner, family, and institutional context, working together. Regression analysis empirically confirms this synergy, with these three factors collectively explaining 68% of the variance in lifelong learning outcomes.

2. The Learner as Foundation: Among these pillars, the learner factor has the greatest influence, emphasizing that attitudes, self-esteem, and a sense of self-regulation are crucial starting points. Strengthening these attributes is a fundamental step for the success of other supporting mechanisms (Knowles, 1980; Sangsri, 2005).

3. Family as Catalyst: Within the Chinese cultural context, the family plays a more prominent role than institutional structures. The cultural principle of filial piety not only dictates the form of caregiving. However, it also strengthens the willingness of retirees to engage in new experiences. Thus, family involvement acts as a social and motivational catalyst that amplifies intrinsic drive (Chen, 2016).

4. The Attitude Skill Paradox: The most important practical finding of this model lies in the discrepancy between the positive attitudes towards learning of retirees and their relatively weak communication skills (Selwyn, 2004; Ine, 2026). This contradiction suggests that the main challenge for lifelong learning programs is not only motivation, but also bridging the digital and communication skills gaps that hinder active participation among adult learners.

Conclusion and Recommendations

1. Research Summary

Across all dimensions, both the influential factors and the level of lifelong learning among retirees in Guangdong Province were high, with learner factors and learning attitudes scoring highest and communication ability and institutional support lowest, though still at high levels. Learner, family, and institutional factors together explained 68% of the variance in lifelong learning, with learner factors having the strongest predictive power, followed by family and institutional factors, highlighting practical communication skills and institutional support as the most urgent areas for improvement.

2. Policy and Practice Recommendations

2.1 Shifting Attitudes Towards Practical Skills: Retirees are highly motivated to learn, but their communication especially digital skills remain limited, so educational institutions should provide application-oriented digital communication and social skills training to close this gap.

2.2 Integrating Family into Learning Design: Given the strong influence of family factors, programs should actively involve family members through intergenerational

learning activities to sustain retirees' motivation and strengthen support networks.

2.3 Repositioning Educational Institutions: Although institutional factors are the weakest predictors, they still play a key motivational role; institutions should evolve into collaborative social learning centres that encourage peer interaction, reduce isolation, and sustain participation.

3. Recommendations for Future Research

3.1 Exploring the Remaining 32% of Variance: Future studies should examine additional determinants such as socioeconomic status, health, and policy interventions to explain the remaining unexplained variance in lifelong learning

3.2 Qualitative Research: In-depth qualitative work, especially interviews with retirees who have low communication skills, is needed to uncover subtle and emotional barriers behind the digital skills gap.

3.3 Comparative Analysis Studies: Comparative research across urban rural areas in Guangdong and between provinces with different socio-economic profiles will provide more context-specific evidence to guide lifelong learning strategies for older adults.

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