

ORIGINAL PAPER

A Confirmatory Factor Analysis of Lifestyle Components among Upper Secondary School Students in the Digital Era

Nithipat Rajphandin*, Sujitra Plianroong

School of Marketing Communication, University of Thai Chamber of Commerce, Bangkok, Thailand

*Corresponding author: nithipat@gmail.com

Received: 09 November 2025 / Revised: 03 December 2025 / Accepted: 15 December 2025

Abstract. In the rapidly evolving digital era, understanding the lifestyle patterns of Generation Z students has become essential for educators and policymakers. This quantitative study aimed to analyze both the exploratory and confirmatory factor structures of the lifestyle model among upper secondary school students in Thailand. The sample consisted of 500 Generation Z students selected through stratified random sampling. Data were collected using a questionnaire approved by the Human Research Ethics Committee, University of the Thai Chamber of Commerce (No. UTCCEC/Exemp 106/2025). Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were employed to validate the model structure. The results revealed three lifestyle dimensions based on the AIO framework: (1) “Experiential and Social Attraction” (Activity), (2) “Sustainable and Self-Development Lifestyle” (Interest), and (3) “Lifelong Learning and Social Engagement Lifestyle” (Opinion). The model demonstrated an acceptable fit with the empirical data which the p-value of the chi-square test is greater than 0.05, CMIN/DF is less than 2.00, GFI is exceed 0.90, RMSEA is less than 0.08. The findings contribute to the theoretical development of digital-era lifestyle measurement and provide practical implications for educational institutions seeking to enhance student engagement in Thailand.

Keywords: Lifestyle, Generation Z, Digital Era, AIO Framework, Exploratory Factor Analysis, Confirmatory Factor Analysis, Thailand

1. Introduction

In the current digital era, technological advances in information and communication have profoundly reshaped the daily lives of individuals, especially adolescents. These youth—often referred to as Generation Z (Gen Z) – those born roughly between 1997 and 2012 (Hammad, 2025) – have grown up surrounded by smartphones, social media platforms and ubiquitous internet access. As digital natives, they integrate online interactions, digital learning, entertainment, and socialization

seamlessly into their routines. For upper secondary school students, technology is no longer just a tool for tasks; it plays a central role in how they learn, play, consume media, form identities and interact with peers. Accordingly, their lifestyle patterns – how they allocate time, what interests they pursue, and what opinions they hold about digital life – are undergoing transformation.

Lifestyle as a construct has long been recognized in consumer and marketing research as an encapsulation of how people live, the choices they make, and the values they hold (Plummer, 1974). The widely-used AIO model (Activities, Interests, Opinions) captures lifestyle by examining what people do (activities), what they like (interests) and what they think (opinions) (Akkaya, 2021; Wells & Tigert, 1971). In the context of adolescents in the digital era, this framework offers a useful lens through which to understand how digital behaviors, preferences and attitudes become embedded in lifestyle patterns.

In Thailand, Gen Z students are immersed in digital connectivity, yet empirical research examining their lifestyle patterns in a holistic manner remains limited. While prior studies have investigated isolated behaviors—such as screen time and physical activity (Mijarra-Murillo et al., 2024), or digital-leisure activities (Tutar & Turhan, 2023)—there is a paucity of research that synthesizes their various digital-age lifestyle components into a cohesive framework, especially among upper secondary (Matthayom) students. Moreover, although one recent study examined digital connectivity, social skills and emotional intelligence among

Thai Gen Z undergraduates (Imjai et al., 2024), there remains a gap at the secondary-school level, where developmental trajectories and lifestyle formation are distinct.

Therefore, this study aims to fill this research gap by investigating the components of lifestyle patterns among upper secondary school students in Thailand, within the digital era. By operationalizing lifestyle via the AIO dimensions and situating them in the context of digital-era behaviors (e.g., online learning, social media, digital leisure), the research seeks to provide an integrative understanding of how Gen Z in Thailand live and think in a digitally mediated environment.

This research is academically significant for several reasons. First, it extends the theoretical application of the lifestyle/AIO framework into a new context: digital-era Gen Z adolescents in Thailand. Second, it contributes to lifestyle-research by adapting measurement to reflect digital behaviors rather than solely traditional offline behaviors. Third, the findings can serve as a foundational dataset for educators, policy-makers and youth-development practitioners to better understand and support students' wellbeing, digital literacy and lifestyle balance in a technology-intensive world.

1.1 The research objective

The objective of this study is to identify and confirm the component variables that constitute the lifestyle model of Thai upper secondary school students in the digital era, using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) techniques.

1.2 Literature Review

In recent decades, the concept of lifestyle has emerged as a powerful lens through which to understand how individuals organize their behaviors, values and self-expressions. As first articulated by Plummer (1974) in his work on lifestyle segmentation, lifestyle can be construed as the patterns of activities, interests and opinions (AIO) that reflect how people “view themselves and their world” (Plummer,

1974, p. 34). This research applies relevant theoretical concepts as a foundation for studying and understanding the lifestyle components of the new generation in the digital age, particularly Generation Z, which is gaining global attention. Lifestyle Concept: This concept defines the term “lifestyle” as a characteristic that shows the overall picture of the different lifestyles of each individual or group of individuals which it is developed from living in society and interacting with other people in society throughout life. It is a behavioral pattern that is reflected in the time spent and spending on activities (activities), interests (interests) and the expression of opinions (opinions). Furthermore, each individual or group of individuals will have different details of their lifestyles, depending on the influence of various factors according to the context of the environment in which that individual or group of individuals lives (Plummer, 1974; Solomon, 2015). In analyzing the components of a person's lifestyle, it is often considered through the concept of AIOs. It is an analysis of psychological characteristics through the use of time spent on activities, attention paid to the environment around the person, and the person's opinion of himself and his surrounding environment that Plummer (1974) divided the dimensions of lifestyle studies into categories of AIOs (AIOs categories of lifestyle studies).

This foundational perspective underscores that beyond mere demographic descriptors, lifestyle reveals the psychological and behavioral dimensions of everyday life, thereby offering a rich conceptual basis for examining the lifestyle components of upper secondary school students in the digital era.

Complementing the lifestyle theory is the framework of the “experience economy” developed by Pine and Gilmore (1998). They posit that the pursuit of memorable experiences has become a distinct form of economic value: “An experience is not an amorphous construct; it is as real an offering as any service, good or commodity.” (Pine & Gilmore, 1998, p. 97). For adolescent students growing up in the digital era, their attraction to novel cafés, travel,

online ordering or social-media sharing can thus be understood through the lens of experience-seeking behavior. Their lifestyle choices do not merely satisfy functional needs but embody aesthetic, escapist and educational dimensions of experiences (Mehmetoglu & Engen, 2011).

Finally, the notion of digital citizenship, as advanced by Mossberger, Tolbert and McNeal (2008), provides a socially oriented theoretical anchor. They define digital citizenship as the capacity to participate in society online and argue that without effective digital participation, individuals may face disadvantages in civic, economic and social spheres (Mossberger et al., 2008). In the context of modern youth, this speaks to how opinion-laden lifestyle components—such as beliefs about lifelong learning, social media use, and civic engagement—are deeply intertwined with digital competencies and social inclusion.

Taken together, these three theoretical strands—lifestyle segmentation (Plummer), the experience economy (Pine & Gilmore) and digital citizenship (Mossberger et al.)—offer a coherent conceptual framework for investigating the components of lifestyle among upper secondary school students in the digital era. They enable the research to capture how attraction-driven behaviors, interest-based development and opinion-shaped values interplay within a digital-mediated life world. By bridging individual motivations, experiential engagements and social participation, this integrated theoretical foundation provides fertile ground for analyzing how modern youth construct, enact and articulate their lifestyles.

2. Methodology

This study is quantitative research that employs factor analysis and factor validation techniques to identify and summarize the most appropriate indicators for each component of the lifestyle of high school students in Thailand in the digital age. The details are as follows:

2.1 Population, sample, sample size and sampling

The population consists of 1,832,969 high school students (Office of the Permanent Secretary, Ministry of Education, 2024). Sample, sample size and sampling: Probability sampling is a method used to obtain a sample that is appropriately representative of the target population. The population in this study comprised high school students (Grades 10–12) studying in both government and private schools across the five regions of Thailand, namely the North, Northeast, Central, South, and Bangkok Metropolitan Region. The sampling group was determined using the Multistage Sampling method (Babbie, 2015). It is a technique suitable for collecting data from populations with a wide geographical distribution and with multi-level sampling units. The sampling process has four steps as follows:

First, the population was stratified by region into five strata based on the geographic areas of Thailand to ensure that the sample was appropriately distributed in each region. In the second step, provinces were randomly selected from each region using the Probability Proportional to Size (PPS) sampling method, using the number of high school students in each province as the criterion for determining the sampling weight. To give provinces with a large number of students a higher chance of being selected than provinces with a small number of students. In the second stage, provinces were randomly selected from each region using the Probability Proportional to Size (PPS) sampling method. The number of high school students in each province was used as the criterion for determining the sampling weight, allowing provinces with larger student populations to have a higher probability of selection than those with smaller ones. In the third stage, within each province selected, schools were classified into two types—government and private—to maintain an appropriate proportion between school types. Subsequently, schools in each category were selected using the Probability Proportional to Size (PPS) sampling method, with the number of high school students in each school serving

as the criterion for determining the probability of selection.

In the fourth stage, within the schools selected, classrooms in Grades 10–12 were randomly chosen using either Simple Random Sampling or Systematic Sampling, depending on the school size. If a classroom contained no more than 40 students, data were collected from all students in that class (Cluster Take-All) to ensure convenience and reduce operational costs. The sample size of 500 respondents meets the criteria for a “very good to excellent” level of adequacy for both factor analysis and structural equation modeling, as suggested by Comrey and Lee (2013). The field data collection was carried out with permission from the school counselors of each participating institution. Informed consent was obtained from all student participants in compliance with the ethical standards of human research. All data were treated with strict confidentiality and used exclusively for academic purposes.

2.2 Data analysis

Part 1: Analysis of Lifestyle Components among Upper Secondary School Students in the Digital Era. Exploratory Factor Analysis (EFA) was employed to examine the underlying structure of the lifestyle components among upper secondary school students in the digital era. The analysis aimed to identify clusters of related variables and determine which observed variables should be grouped together under specific latent factors.

Lifestyle measurement can be conducted through a psychographic analysis using the AIO indicators — Activities, Interests, and Opinions—to assess individuals’ lifestyles, personalities, and demographic profiles. This approach provides deeper insights into consumer behavior beyond traditional demographic segmentation. Manufacturers and marketers often employ psychographic methods to promote products more effectively by aligning them with consumers’ values, preferences, and self-concepts (Jushermi, 2013). According to Plummer and Assael (Setiadi & Se, 2019), lifestyle develops and differentiates across multiple dimensions

represented by AIO, emphasizing that each dimension—what people do, what they are interested in, and what they think—collectively reflects their way of living and serves as a predictor of consumption patterns and brand choices.

The factor extraction and rotation procedures were applied to ensure the clarity and interpretability of the factor structure. The factor rotation technique was used to classify each variable into its most appropriate factor group, following the steps described below.

1) Assessment of Data Suitability: The suitability of the correlation among the 15 observed variables within each component was examined to determine whether the data were appropriate for exploratory factor analysis. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett’s test of sphericity were employed at a significance level of 0.05 to verify the adequacy of the data for factor analysis.

2) Factor Extraction and Correlation Examination: Factors were extracted using the orthogonal rotation method with Varimax rotation. The correlation matrix among all observed variables was analyzed to determine the strength of the relationships between variables. The correlation coefficients among variables were examined to ensure that they met the minimum threshold of 0.50, indicating sufficient intercorrelation to proceed with factor extraction.

3) Factor Rotation and Interpretation: Factor rotation was performed using the Varimax method to achieve a simpler and more interpretable factor structure, allowing each factor to represent a distinct group of independent variables. The rotated factor loadings were then examined to determine which variables loaded most strongly on each factor. This process aimed to clarify the assignment of variables to the most appropriate factor based on their loading values.

4) Factor Identification and Variable Selection: After factor rotation, the selection of variables was based on the highest factor loading values

to group them into their corresponding latent variables. Only variables with factor loadings greater than 0.50 were retained for interpretation, while those with loadings below 0.50 were eliminated from the analysis, indicating that such variables were not sufficiently representative of any factor (Burns & Grove, 1993; Stevens, 1996).

Part 2: Confirmatory Factor Analysis (CFA) of both the first-order levels was conducted using multivariate statistical techniques to analyze and develop the structural model of the lifestyle patterns of upper secondary school students in the digital era. The analysis was performed using the AMOS software package, a high-level statistical tool for structural equation modeling.

The model was refined through latent variable adjustment to ensure its completeness and theoretical coherence. The goodness-of-fit of the model was assessed to confirm that all latent variables and their corresponding components were consistent with the empirical data and met all acceptable statistical criteria. The adjustment of latent variables to achieve model–data consistency was based on the observed variables.

The researcher improved the model iteratively by referring to the Modification Indices (M.I.) suggested by Arbuckle (2016), along with theoretical justification, to identify and remove inappropriate observed variables one at a time. This process was repeated until the final model achieved optimal fit and alignment with the empirical data.

To achieve a model that adequately fits the empirical data, it is essential to consider the evaluation criteria used for assessing model fit. Arbuckle (2016) recommended four key indices that should be taken into account when evaluating the goodness of fit of a structural model, as follows: 1) CMIN-p (Chi-square Probability Value): The p-value of the chi-square test should be greater than 0.05 2) CMIN/DF (Relative Chi-square): The ratio of chi-square to degrees of freedom should be less than 2.00 3) GFI (Goodness of Fit Index): The

value should exceed 0.90 to indicate an acceptable level of model fit and 4) RMSEA (Root Mean Square Error of Approximation): The value should be less than 0.08, suggesting a satisfactory level of model–data fit.

3. Results

3.1. Demography

The majority of the respondents were male upper secondary school students enrolled in government-affiliated educational institutions, with a grade point average (GPA) ranging from 3.00 to 3.49. Most of them lived with their parents and expressed interests in sports and recreational activities. They expected to pursue higher education at the undergraduate level within their own region, with a preference for studying in the field of business administration.

3.2. The exploratory factor analysis

lifestyle components among upper secondary school students in the digital era. The Varimax rotation technique was applied to group the observed variables into their respective components. The analysis yielded a Kaiser–Meyer–Olkin (KMO) Measure of Sampling Adequacy of 0.906, an Approximate Chi-square value of 19,928.791, and a p-value of 0.000, indicating that the data were appropriate for factor analysis. Variables with factor loadings of 0.50 or higher were retained and assigned to their corresponding components (Shrestha, 2021). The results of the exploratory factor analysis revealed that the variables could be categorized into three components based on the AIO (Activities, Interests, and Opinions) conceptual framework which the variables within each component were arranged in descending order of their factor loadings, from the highest to the lowest values, as presented in Tables 1–3.

After conducting the Exploratory Factor Analysis (EFA), a Confirmatory Factor Analysis (CFA) was performed as a crucial step to validate the structure of the latent variables based on the theoretical framework or the hypothesized model established by the researcher. The primary

objective of the CFA was to assess whether the observed variables significantly reflected the underlying constructs and whether the model was consistent with the empirical data (Brown, 2015). This analysis also aimed to systematically evaluate the quality of the measurement model in terms of construct validity and construct reliability, particularly focusing on convergent validity and discriminant validity, which are essential conditions for confirming that the measurement instrument is sufficiently capable of measuring the intended constructs (Hair et

al., 2019). The model fit was assessed using several goodness-of-fit indices, following the recommendations of Arbuckle (2016). The model was refined iteratively by referring to both the statistical outputs and theoretical justifications to remove inappropriate observed variables one at a time, and then the model was re-estimated. This process was repeated until the final model achieved satisfactory fit across all four statistical indices, as illustrated in Figures 1–3 and Table 4.

Table 1. The Component of Activities

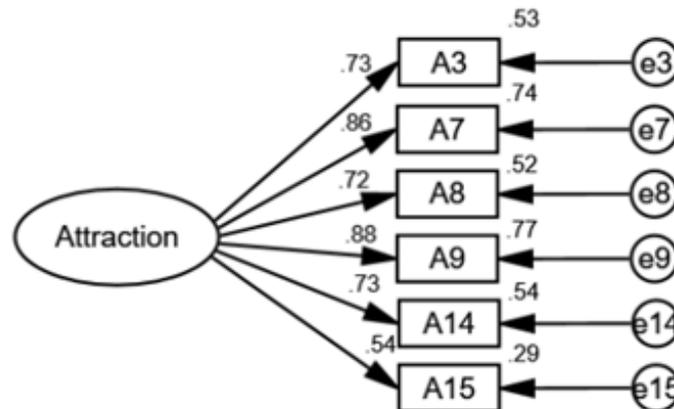
Observe Variable	\bar{X}	Factor Loading
Cronbach Alpha = 0.926		
A9 I like taking photos and sharing them on social media.	3.73	.867
A7 I enjoy traveling both domestically and internationally.	3.64	.861
A1 I often participate in online courses to develop new skills.	3.76	.842
A8 I frequently order food or purchase products through online applications.	3.74	.836
A4 I regularly exercise or play sports.	3.73	.835
A3 I enjoy visiting new cafés or restaurants with friends.	3.63	.831
A14 I like trying new restaurants or trending food menus.	3.64	.825
A10 I enjoy attending entertainment events such as concerts, fairs, or festivals.	3.69	.824
A5 I often participate in volunteer or social service activities.	3.78	.809
A2 I work part-time or earn extra income through digital platforms.	3.61	.803
A6 I spend my free time playing online games.	3.69	.803
A15 I often join competitions or workshops related to my interests.	3.84	.789
A11 I spend time watching online series or videos (e.g., YouTube, TikTok).	3.74	.749
A13 I am interested in joining groups or clubs that match my personal interests.	3.65	.739
A12 I often read books or online articles to gain new knowledge.	3.78	.724

Table 2. The Component of Interest

Observe Variable	\bar{X}	Factor Loading
Cronbach Alpha = 0.964		
I3 I pay attention to health and good nutrition.	3.90	.835
I8 I am interested in traveling and discovering new places.	3.91	.822
I9 I care about the environment and prefer an eco-friendly lifestyle.	3.91	.761
I14 I am interested in foreign cultures such as K-pop, anime, or international series.	3.92	.745
I11 I am interested in learning new languages.	3.94	.726
I4 I am interested in fashion and like to keep up with new dressing trends.	3.90	.725
I10 I am interested in music and performing arts.	3.92	.712
I15 I follow content creators or influencers whom I admire.	3.93	.692
I7 I am interested in following political, economic, and social news.	3.85	.690
I12 I am interested in business, startups, and entrepreneurship.	3.87	.689
I6 I am interested in investment topics such as stocks, cryptocurrency, or mutual funds.	3.79	.654
I5 I am interested in beauty and self-care, such as makeup and skincare.	3.93	.624
I1 I am interested in new technologies such as AI, the Metaverse, or the latest gadgets.	3.94	.608
I2 I follow my favorite artists, actors, or singers on social media.	3.98	.580
I13 I am interested in games, sports, and e-sports.	3.78	.568

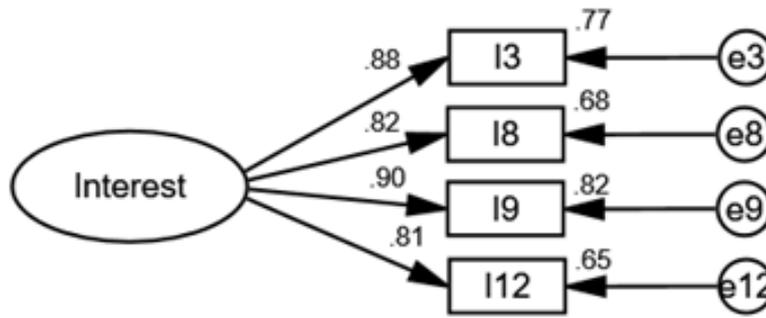
Table 3. The Component of Opinion

Observe Variable	\bar{X}	Factor Loading
<i>Cronbach Alpha = 0.947</i>		
O14 I think that young people should maintain a balance between study/work and relaxation.	3.99	.866
O2 I think that learning should continue throughout one’s lifetime.	3.96	.845
O12 I think that the younger generation should participate in social and political activities.	3.89	.835
O11 I believe that digital knowledge and skills are essential for the future.	3.88	.826
O13 I believe that financial stability is important for life planning.	3.91	.793
O4 I think that buying products that reflect my personality is important.	3.82	.751
O8 I believe that traveling provides valuable life experiences.	3.80	.746
O15 I believe that expressing opinions on social media should be done responsibly.	3.93	.739
O9 I think that investing at a young age is essential.	3.82	.731
O3 I believe that the younger generation should play an active role in environmental conservation.	3.83	.726
O10 I believe that online shopping is convenient and sufficiently safe.	3.78	.718
O7 I believe that using social media is essential in daily life.	3.81	.715
O5 I believe that young people should be open-minded toward gender and cultural diversity.	3.90	.714
O1 I believe that happiness and freedom are more important than job stability.	3.84	.713
O6 I think that freelance or startup work is more appealing than a traditional full-time job.	3.78	.684



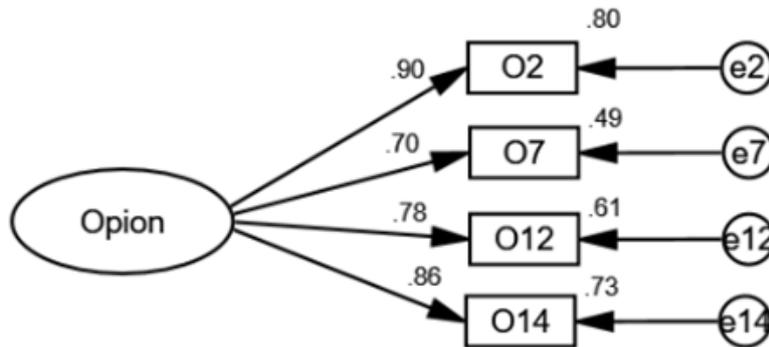
Chi-square = 12.808 ,df = 9, p=.172
 CMIN/DF = 1.423, GFI = .992, RMSEA = .029

Figures 1. Confirmatory factor of Attraction



Chi-square = .730 ,df = 2, p=.694
 CMIN/DF = .365, GFI = .999, RMSEA = .000

Figures 2. Confirmatory factor of Interest



Chi-square = .007 ,df = 2, p=.996
 CMIN/DF = .004, GFI = 1.000, RMSEA = .000

Figures 3 Confirmatory factor of Opinion

Table 4 The statistical values obtained from the confirmatory factor analysis (CFA) after the model modification

Variable	Estimate Standard	R ²	Variance	C.R.	P
Attraction					
A3 I enjoy visiting new cafés or restaurants with friends.	0.73	0.53	0.41		0.001
A7 I enjoy traveling both domestically and internationally.	0.86	0.74	0.22	18.62	0.001
A8 I frequently order food or purchase products through online applications.	0.72	0.52	0.39	15.54	0.001
A9 I like taking photos and sharing them on social media.	0.88	0.77	0.16	18.94	0.001
A14 I like trying new restaurants or trending food menus.	0.73	0.54	0.46	15.83	0.001
A15 I often join competitions or workshops related to my interests.	0.54	0.29	0.54	11.63	0.001

Table 4 The statistical values obtained from the confirmatory factor analysis (CFA) after the model modification (continue)

Variable	Estimate Standard	R ²	Variance	C.R.	P
Interest					
I3 I pay attention to health and good nutrition.	0.88	0.77	0.14		0.001
I8 I am interested in traveling and discovering new places.	0.82	0.68	0.20	23.43	0.001
I9 I care about the environment and prefer an eco-friendly lifestyle.	0.92	0.82	0.11	27.42	0.001
I12 I am interested in business, startups, and entrepreneurship.	0.81	0.65	0.23	22.78	0.001
Opinion					
O2 I think that learning should continue throughout one's lifetime.	0.90	0.80	0.12		0.001
O7 I believe that using social media is essential in daily life.	0.70	0.49	0.46	17.98	0.001
O12 I think that the younger generation should participate in social and political activities.	0.78	0.61	0.24	21.15	0.001
O14 I think that young people should maintain a balance between study/work and relaxation.	0.86	0.73	0.16	24.29	0.001

4. Conclusion

The research findings revealed that the confirmatory factors of the lifestyle model of Thai high school students in the digital era under the Attraction dimension consisted of six indicators, namely: I enjoy visiting new cafés or restaurants with friends, I enjoy traveling both domestically and internationally, I frequently order food or purchase products through online applications, I like taking photos and sharing them on social media, I like trying new restaurants or trending food menus, I often join competitions or workshops related to my interests. The Attraction dimension consisted of four indicators, namely: I pay attention to health and good nutrition, I am interested in traveling and discovering new places, I care about the environment and prefer an eco-friendly lifestyle, and I am interested in business, startups, and entrepreneurship. The Opinion dimension consisted of four indicators, namely: I think that learning should continue throughout one's lifetime, I believe that using social media is essential in daily life, I think that the younger generation should participate in social and political activities, and I think that young people should maintain a balance between study/work and relaxation.

From the variables within each component, the names of the components that best reflect their respective indicators can be identified as follows: 1) “Experiential and Social Attraction” — representing the Attraction (A) dimension, 2) “Sustainable and Self-Development Lifestyle” — representing the Interest (I) dimension, and 3) “Lifelong Learning and Social Engagement Lifestyle” — representing the Opinion (O) dimension.

5. Discussion

The findings of the study revealed that the confirmatory factor analysis (CFA) of the lifestyle model of Thai high school students in the digital era yielded three significant components—Experiential and Social Attraction, Sustainable and Self-Development Lifestyle, and Lifelong Learning and Social Engagement Lifestyle—which collectively explain the multifaceted nature of students' digital-era lifestyles.

1. Experiential and Social Attraction (A Dimension)

This component represents the tendency of students to seek new and enjoyable experiences through both online and offline social activities. The indicators, such as enjoying

visits to new cafés, traveling, ordering food through digital platforms, and sharing photos on social media, illustrate a socially connected and experience-oriented lifestyle. These findings correspond with the concept of *experiential consumption* proposed by Pine and Gilmore (2011), which emphasizes that young individuals value memorable experiences more than material possessions. In the context of Thai high school students, this dimension highlights how digital technologies have become enablers of social connection and lifestyle expression. The preference for trending restaurants and participation in workshops reflects not only social belonging but also the construction of digital identity, aligning with Kozinets' (2015) theory of *digital social communities*.

2. Sustainable and Self-Development Lifestyle (I Dimension)

This component underscores the growing awareness among students regarding health, environment, and personal growth. The inclusion of indicators such as attention to good nutrition, care for the environment, and interest in business and entrepreneurship demonstrates a forward-looking, sustainability-oriented mindset. The result aligns with the notion of *sustainable youth identity* discussed by Verplanken and Roy (2013), which suggests that young people increasingly integrate ecological consciousness and self-improvement into their daily choices. Thai students, in this sense, are not only digitally literate but also socially responsible citizens who recognize the interdependence between personal success and environmental well-being. Their interest in entrepreneurship further indicates a shift from passive consumerism toward *proactive, opportunity-driven behavior* consistent with the *growth mindset theory* of Dweck (2006).

3. Lifelong Learning and Social Engagement Lifestyle (O Dimension)

The third component reflects students' cognitive and attitudinal dimensions toward learning, digital participation, and civic responsibility. Variables such as the belief in

lifelong learning, the perceived necessity of social media in daily life, and the encouragement of youth participation in social and political activities indicate a mindful, balanced, and socially aware lifestyle. These findings support theories of *digital citizenship* (Mossberger et al., 2008) and *lifelong learning orientation* (Candy, 2002), suggesting that digital-native students perceive education not as a bounded period but as a continuous process facilitated by online media. The belief in maintaining a balance between study, work, and relaxation further demonstrates emotional maturity and psychological adaptability, crucial traits in the 21st-century learning ecosystem.

Overall Discussion:

Taken together, the three components demonstrate that Thai high school students have developed a multidimensional digital lifestyle characterized by experience-seeking, responsibility, and self-directed growth. The model supports the argument that youth lifestyles in the digital age are no longer defined merely by media consumption but by how digital tools (Shaw, Jitrapai & Kheokao, 2025) are integrated into social connection, self-fulfillment, and civic awareness. This aligns with recent research on Generation Z behavior (Turner, 2021; Prensky, 2012), which emphasizes *digital fluency, self-expression, and sustainability consciousness* as key lifestyle drivers. Thus, the proposed lifestyle model not only provides empirical evidence of these patterns but also contributes to understanding how education and digital policy can better support the holistic development of young people in Thailand's evolving social context.

4. The findings indicate that Item I9, "I care about the environment and prefer an eco-friendly lifestyle," had the highest factor loading, suggesting that environmental consciousness is a central dimension of students' lifestyles in the digital era. This result highlights that young people increasingly value sustainable living and recognize their role in protecting the planet. Social media exposure to

environmental issues also enhances awareness and shapes eco-friendly behaviors among adolescents (Balundé, 2020; Raman, 2024). Therefore, environmental concern has become not only a personal value but also a key lifestyle feature driving responsible consumption and positive social participation (Peiró-Signes, 2025).

6. Recommendation for Implication

6.1 Practical Recommendations

1. **Designing Experience-Based Learning Activities.** Schools should create learning experiences that go beyond classroom instruction by integrating social and digital exploration. Activities such as simulated café projects or cultural tourism through digital storytelling can enhance students' experiential and social engagement. These opportunities allow learners to develop communication, teamwork, and digital literacy skills while strengthening their sense of connection with others.

2. **Embedding Sustainability Concepts into the Curriculum.** Educators and school leaders should incorporate environmental awareness, personal health, and entrepreneurial thinking into teaching practices. Projects like student-led green businesses or workshops on circular economy principles can nurture a sustainable and self-development mindset. Such approaches encourage students to view their actions through both ecological and economic lenses, preparing them to become responsible innovators.

3. **Cultivating a Culture of Lifelong Learning in Schools.** Schools should nurture an environment that values curiosity and self-directed learning. Initiatives such as digital portfolios, online skill challenges, or self-reflection weeks can inspire students to pursue knowledge independently. This also helps them maintain balance between study, leisure, and social participation, reinforcing attitudes related to lifelong learning and civic responsibility.

6.2 Policy Recommendations

1. **Establishing a Mindful Digital Literacy Policy.** The Ministry of Education should promote a national policy that develops digital competence grounded in responsibility and ethical awareness. Students need guidance to use social media as a tool for learning, creativity, and community engagement. This policy should emphasize *digital citizenship*—a balanced use of technology that empowers youth to think critically and act responsibly online.

2. **Developing a Youth Sustainability Policy.** Government agencies should implement a long-term policy that encourages environmental consciousness and healthy living among young people. Initiatives such as “Green Schools” can connect the values of health, sustainability, and entrepreneurship. This direction aligns with the United Nations Sustainable Development Goals (SDGs 3, 4, and 13) and promotes a lifestyle that integrates environmental care with personal growth.

3. **Promoting Lifelong Learning and Civic Engagement Policy.** Policymakers should expand community learning opportunities that inspire continuous learning and social participation. Programs like *Community Learning Hubs* and *Youth Civic Labs* can give young people platforms to express ideas, develop critical thinking, and take part in solving local issues. Such efforts strengthen the foundation of lifelong learning and nurture civic-minded citizens for the future.

7. Future Study

1. **Expanding the Scope to Diverse Educational Contexts.** Future research could explore whether the lifestyle model identified in this study applies to students from different educational settings, such as vocational schools or rural communities. Comparing these groups would deepen understanding of how regional, cultural, and socioeconomic factors influence digital-era lifestyles and values among Thai youth.

2. Longitudinal Investigation of Lifestyle Transformation. A longitudinal design would provide valuable insights into how students' lifestyles evolve over time as technology, social media platforms, and learning environments change. Tracking the same cohort across several years could reveal patterns of adaptation, sustainability awareness, and digital engagement that cross-sectional data cannot fully capture.

3. Integrating Qualitative Perspectives for Deeper Understanding. Further studies should complement quantitative models with qualitative approaches such as in-depth interviews or digital ethnography. This would allow researchers to interpret the emotions, motivations, and personal meanings behind students' lifestyle choices—particularly their pursuit of experiences, sustainability, and lifelong learning in the digital age.

References

- Arbuckle, J L (2016) *IBM SPSS Amos 24 user's guide* IBM Corporation
- Akkaya, M (2021) Understanding the impacts of lifestyle segmentation *European Research on Management and Business Economics*, 27, 100155
- Babbie, E (2015) *Observing ourselves: Essays in social research* Waveland Press
- Balundè, A (2020) Environmental considerations in adolescence and their relationship to pro-environmental behavior *Frontiers in Psychology*, 11, 582920
- Comrey, A L, & Lee, H B (2013) *A first course in factor analysis* (2nd ed.) Psychology Press
- Hammad, H S (2025) Examining the learning needs and preferences of Generation Z: A survey *Journal of Higher Education and Technology* Advance online publication
- Imjai, N, Aujirapongpan, S, Jutidharabongse, J, Usman, B (2024) Impacts of digital connectivity on Thailand's Generation Z undergraduates' social skills and emotional intelligence. *Contemporary Educational Technology*, 16(1), ep487
- Jones, L M, Mitchell, K J, Beseler, C L (2023) The impact of youth digital citizenship education: Insights from a cluster randomized controlled trial outcome evaluation of the "Be Internet Awesome" curriculum. *Contemporary School Psychology* Advance online publication.
- Jarupongputtana, C, Mangkhang, C, Dibyamandala, J, & Manokarn, M (n.d.) Interdisciplinary community-based learning to enhance digital citizenship competence of social studies pre-service teachers in the Thai context *Journal for Curriculum and Teaching*
- Mijarra-Murillo, J J, Polo-Recuero, B, Solera-Alfonso, A, Arribas-Romano, A, García-González, M, Laguarda-Val, S, & Delfa-de-la-Morena, J M (2024) Leisure time habits and levels of physical activity in children and adolescents *Children*, 11(7), 883
- Peart, M, Cubo-Delgado, S, Gutiérrez-Esteban, P (2022) Exploring the role of digital and socio-civic skills for promoting youth participation and digital citizenship *European Journal of Educational Research*, 11(2), 697–709
- Peiró-Signes, Á, Biondo, A, Sakka, G, Borsellino, V, Galati, A (2025) Exposure to social media pro-environmental campaigns and its impact on Generation Z's commitment to environmental sustainability actions *Sustainable Futures*, 10, 101320
- Pine, B J, & Gilmore, J H (1998) Welcome to the experience economy *Harvard Business Review*, 76(4), 97–105
- Plummer, J T (1974) The concept and application of lifestyle segmentation. *Journal of Marketing*, 38(1), 33–37
- Milenkova, V (2021) Digital citizenship and digital literacy in the conditions of contemporary society *Computers*, 10(4) Article 40

- Shaw, K, Jitprapai, N, Kheokao, J (2025)
Understanding the perceptions of Asian
university students toward Thai tourism
destinations: The cases of Phuket and
Pattaya *Asian Journal for Public
Opinion Research*, 13(1), 122–160
- Setiadi, N J, & Se, M M (2019) *Perilaku
konsumen: Perspektif kontemporer pada
motif, tujuan, dan keinginan konsumen*
(3rd ed, Vol 3) Prenada Media
- Solomon, M. R. (2015) *Consumer behavior:
Buying, having, and being* (11th ed)
Pearson
- Tutar, Ö F, & Turhan, F H (2023) Digital
leisure: Transformation of leisure activities.
*Current Research in Educational
Studies*, 16
- Wells, W D, & Tigert, D J (1971) Activities,
interests and opinions *Journal of
Marketing*, 35(4), 37–41