Desired Accounting Graduate Characteristics According to Learning Outcomes Under the Higher Education Qualifications Framework 2022: Empirical Evidence Asia-Pacific International University

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Received: 30/10/2025 *Revised: 16/12/2025* *Accepted: 19/12/2025*

Abstract

This study examined the desired characteristics of accounting graduates based on the Higher Education Qualifications Framework (2022) using a mixed-methods approach. Quantitative data were collected from 213 participants, including alumni, employers, and entrepreneurs, and analyzed using confirmatory factor analysis. Reliability, assessed with Cronbach's Alpha Coefficient, yielded a value of 0.96. Qualitative data were obtained from 14 purposively selected participants, including employers, business owners, and alumni, through in-depth interviews. Results from the second-order confirmatory factor analysis indicated an acceptable model fit, with $\chi^2 = 8.29$, $\chi^2/df = 1.04$, $p = 0.41$, GFI = 0.99, AGFI = 0.95, CFI = 1.00, and RMSEA = 0.01. The model comprised four constructs: knowledge, skills, ethics, and character

which served as valid measures of desired graduate characteristics, with accounting and professional ethics prioritized by stakeholders. The qualitative findings identified four key dimensions. Knowledge encompassed expertise in finance, law, taxation, and professional accounting practices. Skills included computer literacy, English proficiency, self-development, continuous professional development, teamwork, problem-solving, communication and presentation abilities, analytical thinking, systematic planning, adaptability, and accounting software proficiency. Ethics were reflected in integrity, honesty, and organizational responsibility, while character comprised good conduct, humility, selflessness, responsibility, meticulousness, self-confidence, leadership, a positive attitude, punctuality, diligence, and perseverance. The study recommends revising accounting curricula to prioritize ethical development alongside knowledge and skills, ensuring graduates meet labor market expectations and contribute to sustainable human capital development in the 21st century.

Keywords: Bachelor of Accountancy, Desired Graduate, Graduate Characteristics

1. Introduction

Educational institutions function as key providers of human capital to meet the demands of various organizations. However, when the characteristics of graduates fail to correspond with the expectations of employers in the labor market, it can adversely affect employment and result in an excess supply of low-quality labor. (Sukkaewmanee, 2016) The 13th National Economic and Social Development Plan (2023–2027) emphasizes the holistic development of Thai people to reach their full potential across all stages of life. It aims to equip individuals with the essential competencies needed for the modern era, foster desirable social values, promote moral and ethical integrity, and ensure alignment with the demands of the production sector and development goals. In line with the 20-Year National Strategy (2018–2037) on human resource development and capacity enhancement, the focus is on nurturing Thai citizens who are virtuous, capable, and of high quality, equipped to thrive in the 21st century. The strategy aspires to create a societal environment that fosters and supports lifelong human development. Furthermore, the Higher Education Plan for Workforce Production and Development (2021–2027, revised 2023–2027) places strong emphasis on lifelong learning as part of the Human Resource Development Strategy. Its goal is to cultivate human potential that aligns with the nation's development trajectory guided by the BCG Model. (Ministry of Higher Education, Science, Research and Innovation, 2023). It is evident that the government prioritizes the enhancement of human capital to reach greater potential. Consequently, graduates who acquire the required skills and competencies through comprehensive development will be better positioned to fulfill the needs of the labor market.

According to the announcement of The Commission on Higher Education Standards (CHES) regarding the Bachelor's Degree Curriculum Standards (2022), which came into effect on September 27, 2022 (The Commission on Higher Education Standards, 2022), the Asia-Pacific International University, Faculty of Business Administration, Bachelor of Accountancy program, is required to revise its curriculum in accordance with this announcement. This is to ensure the production of desirable accounting graduates who meet the Bachelor's Degree Curriculum Standards (2022) and the Higher Education Qualifications Framework (2022), which specify learning outcomes in four areas: 1) knowledge, 2) skills, 3) ethics, and 4) character (Office of the Permanent Secretary, Ministry of Higher Education, Science, Research and Innovation, 2022), and aligned with the requirements of the Federation of Accounting Professions under the Royal Patronage His Majesty The King, which outlines learning outcomes according to the revised 2015

international education standards. These encompass technical knowledge and skills, professional competencies, values, ethics and professional attitudes, practical work experience, overall abilities and competencies, as well as ongoing professional development (Federation of Accounting Professions under the Royal Patronage of His Majesty The King, 2017).

In response to these changes, the university sought to revise its curriculum to better align with the needs of various sectors. However, it lacked clear evidence regarding which dimensions of student development were required in each area. To address this issue, graduate characteristics were conceptualized into four components. The knowledge component comprises both general and professional knowledge; the skills component includes 21st-century lifelong learning skills, professional competencies, and practical work experience; the ethics component encompasses moral and ethical values as well as professional accounting ethics; and the character component reflects general personal attributes alongside qualities that represent the university's distinctive identity. Empirical data were subsequently analyzed to assess the desired levels of accounting graduate characteristics, leading to the development and validation of a model. The findings of this study provide guidance for educational institutions in developing accounting graduates whose competencies meet stakeholder expectations.

2. Research Objectives

2.1 To examine the level of the desired accounting graduate characteristics.

2.2 To develop and validate a model of the desired accounting graduate characteristics.

3. Related Literature Review

3.1 Principles and Concepts of Desired Characteristics of Accounting Graduates

The Higher Education Qualifications Framework (2022) specifies learning outcomes in four areas: 1) knowledge, 2) skills, 3) ethics, and 4) character, which higher education institutions use as guidelines for curriculum improvement. Supporting this approach, Rodjam and Mungsing (2019) examined factors influencing accountants' competencies based on desired characteristics and categorized them into four domains: professional knowledge and intellect, professional ethics, practical work, and proficiency in diverse skills. Similarly, Sukkaewmanee (2016) analyzed employer expectations regarding the desired characteristics of accounting graduates and found that the desired characteristics comprise four areas: professional ethics and attitudes, knowledge and abilities, skills and aptitudes, and personality and specific attributes.

3.1.1 Knowledge

Knowledge refers to the essential and adequate understanding that can be applied in practice, further developed, and adapted to enhance work performance (Office of the Permanent Secretary, Ministry of Higher Education, Science, Research and Innovation, 2022). Knowledge is categorized into two domains. The first, general knowledge, encompasses areas such as economics, organization and business, finance, marketing, law, numerical and analytical skills, and statistics (Chanowan, 2023; Dulanee & Eapsirimetee, 2019; Sukkaewmanee, 2016). The second, professional knowledge, includes specialized knowledge in accounting, internal auditing, auditing, and taxation (Gunnarapong, Binyasen, Rodjun, & Polinhom, 2023).

3.1.2 Skills

Skills are defined as the abilities developed through learning and practice, enabling individuals to become proficient, agile, and competent in order to enhance work performance, professional or academic development, and promote the development of personal and societal

competencies in the digital age (Office of the Permanent Secretary, Ministry of Higher Education, Science, Research and Innovation, 2022). Skills are categorized into three domains. The first domain, 21st-century lifelong learning skills, refers to the capacity to acquire knowledge without limitations of time or place, fostering continuous self-development. This includes analytical, synthetic, and critical thinking skills; creative and innovative thinking; computational and problem-solving abilities; information literacy; self-directed learning; teamwork and interpersonal skills; information technology proficiency; and communication skills (Chaiya, 2019; Noimala, 2021). The second domain, professional skills, involves applying knowledge to perform tasks, solve problems, make decisions, and exercise judgment in accounting practice. It also includes skills in using software applications for work, performing calculations, conducting risk analyses, planning and controlling processes, and preparing reports (Butsalee, Rakkarnsil, & Sawaengwarot, 2022). The third domain, practical work experience skills, refers to competencies acquired through hands-on experience in workplace settings (Butsalee, Rakkarnsil, & Sawaengwarot, 2022).

3.1.3 Ethics

Ethics refers to individual behaviors or actions that reflect moral integrity, virtue, and professional conduct, aimed at benefiting both the public and oneself, whether in public or private settings. It involves actions that comply with social rules, contribute positively to society, avoid violating societal norms, and adhere to the law (Office of the Permanent Secretary, Ministry of Higher Education, Science, Research and Innovation, 2022). Ethics can be divided into two domains. The first, moral and ethical behavior, refers to conduct that reflects general moral and ethical principles beyond accounting professional standards, such as honesty and integrity (Kumchuen, 2023; Sukkaewmanee, 2016). The second, accounting professional ethics, refers to fundamental principles that must be followed by accounting professionals, as established by the Federation of Accounting Professions under the Royal Patronage of His Majesty the King. These principles include professional and business integrity, fairness and independence, knowledge and competence, diligence and adherence to work standards, confidentiality, professional conduct, and transparency (Butsalee, Rakkarnsil, & Sawaengwarot, 2022; Federation of Accounting Professions under the Royal Patronage of His Majesty The King, 2019; Gunnarapong, Binyasen, Rodjun, & Polinhom, 2023; Sripan, Anantasophon, Siriprapim, & Na Loumpool, 2018).

3.1.4 Character

Character refers to personality traits, habits, and values that reflect the distinctive characteristics of a discipline, profession, and institution, developed through learning and experiential training (Office of the Permanent Secretary, Ministry of Higher Education, Science, Research and Innovation, 2022). These character attributes are divided into two domains. The first, general character, includes personality, habits, leadership, and being careful and meticulous (Gunnarapong, Binyasen, Rodjun, & Polinhom, 2023; Sukkaewmanee, 2016). The second character, according to the identity of Asia-Pacific International University, emphasizes a service-oriented mindset.

3.2 Components of Accounting Professionals' Competencies

Previous studies have explored the competency components of accountants with reference to the desired characteristics of accounting professionals. The findings indicate that an accountant's professional knowledge and expertise, adherence to professional ethics, performance in practical tasks, and proficiency across various skill areas collectively contribute to the

development of competencies aligned with these desirable professional characteristics (Rodjam & Mungsing, 2019). Moreover, research on the competencies required of 21st-century accounting professionals has identified several critical areas. Specialized knowledge includes proficiency in accounting and auditing standards, preparation of financial reports in accordance with reporting standards, financial analysis, use of accounting software and information systems, and understanding of tax regulations, relevant civil and commercial laws, as well as the personal data protection act. Core skills encompass communication, language proficiency, numerical and computational abilities, analytical and problem-solving skills, teamwork, and digital technology proficiency. Key professional attributes involve leadership, ethics and social responsibility, governance principles, and compliance with laws and accounting professional standards (Jindanil & Chitsakul, 2023). This finding aligns with the research of Khuma, Thipwiwatpotjana, and Bootnoi (2020), who identified three overarching factors representing the essential competencies of Thai accounting graduates: accounting knowledge and skills, business knowledge and skills, and work and lifelong learning skills. Furthermore, previous studies by Sripan, Anantasophon, Siriprapim, and Na Loumpool (2018) and Sukkaewmanee (2016) revealed that ethical attributes, particularly integrity, fairness, and adherence to professional ethics, are considered by employers to be more desirable qualities among accounting professionals than technical knowledge, skills, and personality traits.

Based on the aforementioned literature review, it can be concluded that the desired characteristics of accounting graduates comprise four key components: (1) knowledge, including both general and professional knowledge; (2) skills, encompassing lifelong learning skills for the 21st century, professional skills, and practical work experience skills; (3) ethics, consisting of moral and ethical values together with professional ethics in accounting; and (4) character, which include general personal traits and those reflecting the university's unique identity.

4. Research Methodology

4.1 Quantitative Research Sample

To ensure an adequate sample size for confirmatory factor analysis, which generally requires a minimum of 200 participants for models of low complexity, Hair, Sarstedt, Hopkins, and Kuppelwieser (2014) recommend at least 200 cases. Accordingly, this study employed a non-probability purposive sampling method to collect data from alumni of the accounting program and from employers across various sectors, including accounting services, financial services, hotel and tourism, industrial and manufacturing, educational services, retail, and real estate and construction. A total of 213 valid responses were obtained.

4.2 Qualitative Research Sample

The qualitative component comprised 14 participants, including employers, business owners, and alumni, who were selected through purposive sampling. This sampling strategy seeks individuals with specialized expertise or relevant experience (Creswell, 2013). Accordingly, participants were selected based on their relevant expertise and willingness to provide informed insights. Seven alumni with professional accounting experience were included, while four employers and three business owners were individuals occupying supervisory positions or serving as heads of accounting departments.

4.3 Research Instruments

The study was granted ethical approval by the Research Ethics Review Committee on March 20, 2024, under resolution number RRDC2024-46. The research instrument was a structured questionnaire comprising three sections. Section 1 collected demographic and general information of the respondents. Section 2 assessed the Desired Accounting Graduate Characteristics across four dimensions; Knowledge, Skills, Ethics, and Character, using 70 items measured on a Likert-type rating scale. The questionnaire was developed based on the research of Gunnarapong, Binyasen, Rodjun, & Polinhom (2023), Rodjam and Mungsing (2019), Sripan, Anantasophon, Siriprapim, & Na Loumpool (2018), and Sukkaewmanee (2016). Section 3 included four supplementary questions to gather additional insights.

The questionnaire employed as the research instrument underwent content validity assessment by three experts, who evaluated the congruence between each item and the research objectives using the Item-Objective Congruence (IOC) index, resulting in an overall IOC value of 0.96. The instrument was then pilot-tested with 30 respondents exhibiting characteristics similar to the target population. Reliability was assessed using Cronbach's Alpha Coefficient, which yielded a value of 0.96. As suggested by Cho and Kim (2015), a Cronbach's Alpha of 0.70 or higher indicates adequate reliability, confirming that the questionnaire is suitable for subsequent data analysis. The samples were split into two groups: the first group with 106 participants and the second group with 107 participants. An independent samples t-test was conducted to assess the validity of the instrument, which revealed no statistically significant difference between the samples (p = .263), supporting the validity of the measurement instrument (Hair, Black, Babin, & Anderson, 2019).

In-depth interviews were conducted to identify the desired characteristics accounting graduates using purposive sampling. The data collection process incorporated interview sessions, field note documentation, and audio recordings. The semi-structured questionnaire consisted of four open-ended questions developed from a comprehensive review of the literature on the desired characteristics of graduates. The questions were as follows: In which areas do you believe universities should enhance graduate development to better meet employer expectations? What characteristics do you think current graduates lack when compared to the demands of real-world work environments? If you were to define the characteristics of future accounting graduates, what key components should be included? Are there any additional comments you would like to share regarding the desirable characteristics of accounting graduates? After each interview, field notes and verbatim transcripts were systematically reviewed to ensure completeness and accuracy, with data collection ending upon reaching saturation. Data trustworthiness was enhanced through triangulation of interviews, observations, and field notes collected at different times and settings, as well as peer debriefing with experts. Member checking was also conducted, with all participants confirming the accuracy and consistency of the findings. Subsequently, only high-quality and analytically meaningful discourses were retained to support the study's discussion and conclusions.

4.4 Data Analysis and Statistics

This study utilized descriptive statistics to analyze the general information of the respondents, including frequency and percentage. The level of desired accounting graduate characteristics was analyzed using mean and standard deviation. Construct validity was examined using exploratory factor analysis (EFA) to identify the underlying factor structure, followed by

first-order and second-order confirmatory factor analyses. Model fit was evaluated using the χ^2/df, p-value, GFI, AGFI, CFI, RMR, and RMSEA indices (Kline, 2016).

Qualitative data were analyzed using content analysis with open coding. The data was categorized and examined to determine the emerging themes and their relationships. Selective coding was subsequently used to synthesize key concepts, and findings were derived through inductive reasoning to ensure alignment with the empirical data.

5. Conceptual Framework

The Desired Accounting Graduate Characteristics (DAGC) can be conceptualized into four principal dimensions: (1) Knowledge (K), encompassing both General Knowledge (GK) and Accounting Knowledge (AK); (2) Skills (S), which comprise Generic Skills (GS) for lifelong learning in the 21st century, Specific Skills (SS) pertinent to the accounting profession, and Internship Skills (IS) acquired through practical work experience; (3) Ethics (E), including General Ethics (GE) and Accounting Ethics (AE); and (4) Character (C), consisting of General Character (GC) and AIU Character (AIUC), representing the unique institutional identity of Asia-Pacific International University.

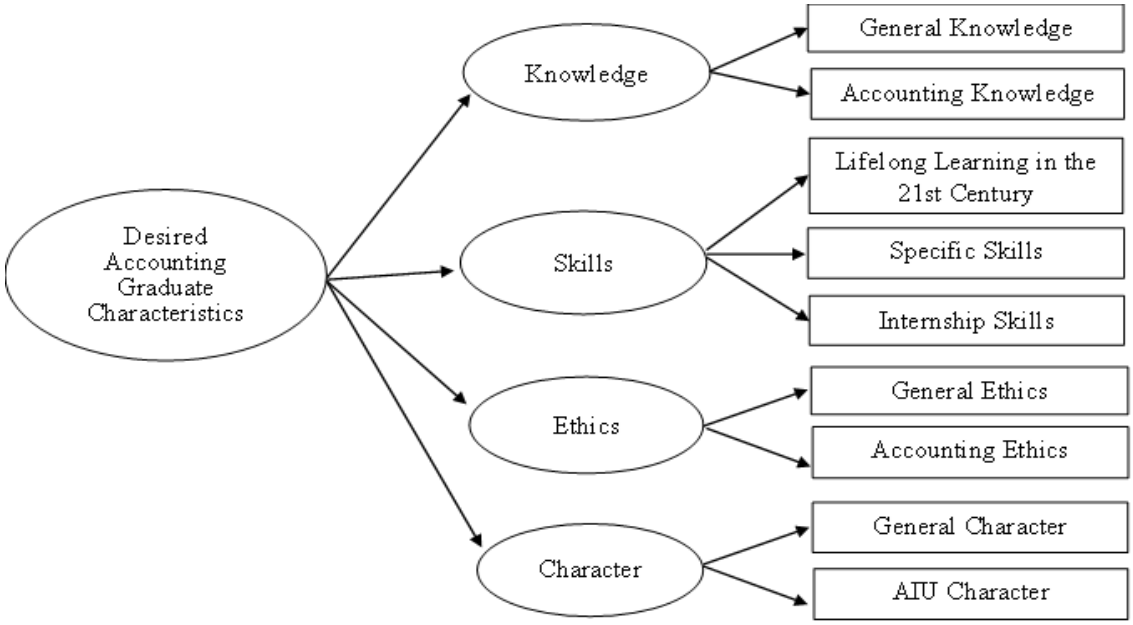


Figure 1 Conceptual Framework of Desired Accounting Graduate Characteristics

6. Research Findings

6.1 General Information of the Respondents

The analysis of the respondents' general characteristics indicated that the sample comprised 213 participants. The majority were employers (n = 130, 61%) and female (n = 169, 79.3%). Most respondents were aged 31–40 years (n = 68, 31.9%) and held a bachelor's degree (n = 146, 68.5%). Regarding business sectors, 62 participants (29.1%) were engaged in industrial and manufacturing. In terms of organizational role, 86 participants (40.4%) occupied supervisory positions. A substantial proportion worked in accounting-related functions (n = 157, 73.7%), and 86 participants (40.4%) reported having more than 15 years of professional experience.

6.2 Analysis of the Level of Desired Accounting Graduate Characteristics

The analysis of the level of desired accounting graduate characteristics indicated that all four dimensions were rated at a high level. The knowledge dimension achieved a high overall rating (M = 4.09, SD = 0.67), with its subcomponents-Accounting Knowledge (M= 4.13, SD = 0.78) and General Knowledge (M = 3.64, SD = 0.70) also rated highly. Similarly, the skills dimension was rated at a high level (M = 4.07, SD = 0.71), with subcomponents including Internship Skills (M = 4.03, SD = 0.78), Generic Skills for Lifelong Learning in the 21st Century (M = 3.94, SD = 0.76), and Professional Skills (M= 3.81, SD = 0.80). Ethics received the highest rating among the four dimensions (M = 4.33, SD = 0.75), with subcomponents of Accounting Ethics (M = 4.44, SD = 0.70) and General Ethics and Morality (M = 4.31, SD = 0.74). The character dimension was also rated highly (M = 4.18, SD = 0.75), with General Character (M = 4.36, SD = 0.66) and AIU Character (M = 4.36, SD = 0.67) as subcomponents. When the main dimensions were ranked according to their mean scores, Ethics emerged as the highest-rated dimension, followed by Character, Knowledge, and Skills in descending order.

6.3 Exploratory Factor Analysis

This research employed exploratory factor analysis (EFA) to study the number of factors and the relationship structure of observed variables before testing the fit of the measurement model using confirmatory factor analysis (CFA). Factor analysis refers to a broad group of data processing techniques that lack a clear definition and are often used in the social and biological sciences. It explores empirical data to examine interesting characteristics and connections without having to build precise data models (McDonald, 2014). According to the criteria of Hair, Black, Babin, and Anderson (2019), observed variables should have a factor loading of at least 0.50. The results showed that each latent factor had a high factor loading and met the specified criteria. The GK component had a factor loading between 0.78–0.85, the AK component between 0.83–0.94, and the GS component between 0.60–0.83. The SS component had a factor loading value between 0.67–0.87, and the IS component between 0.81–0.91. Furthermore, the GE component has a factor loading value between 0.75–0.84, the AE component between 0.71–0.90, the GC component between 0.60–0.82, and the AIUC component between 0.81–0.87. This demonstrates that the observed variables effectively explain their latent components, and there is no issue with substandard factor weights. These analysis results reflect the clarity of the component structure and support the suitability of using the components and variables that meet the criteria in the next step of Confirmatory Factor Analysis (CFA).

6.4 Confirmatory Factor Analysis

The confirmatory factor analysis of the desired accounting graduate characteristics revealed that the construct comprises four dimensions: Knowledge, Skills, Ethics, and Character, encompassing a total of 65 observed variables. From the original 70 variables, five items (GS1, GS2, GC1, GC5, and GC9) were eliminated because their factor loadings were below the acceptable threshold of 0.50, as recommended by Hair, Black, Babin, and Anderson (2010). The adequacy of the correlation matrix was confirmed through Bartlett's Test of Sphericity, which was statistically significant, and the Kaiser-Meyer-Olkin (KMO) measure indicated that the variables were sufficiently interrelated to satisfy the statistical assumptions for factor analysis. These results support the suitability of the data for subsequent confirmatory factor analysis, as presented in Tables 1–4.

Table 1 Component 1: Knowledge

Variables	Factor loadings
AK4 Demonstrates knowledge of accounting principles and processes, particularly in preparing adjusting and closing entries.	0.93
AK5 Demonstrates understanding of the principles and methodologies involved in preparing trial balances and financial statements.	0.89
AK2 Demonstrates understanding of accounting principles and methods for recording transactions concerning assets, liabilities, equity, revenues, and expenses.	0.88
AK3 Demonstrates understanding of the principles and methods for maintaining accounts related to petty cash and bank deposits.	0.85
GK3 PosGK3: Demonstrates understanding of fundamental concepts and principles of marketing.	0.84
GK4 Demonstrates understanding of statistical concepts and principles applicable to research.	0.82
AK1 Demonstrates understanding of the principles and methods of recording accounting transactions related to taxes.	0.80
GK2 Demonstrates understanding of fundamental concepts in economics, finance, and investment.	0.77
GK6 Demonstrates understanding of principles and practices in organizational and business management.	0.76
AK7 Demonstrates understanding of the concepts and applications of accounting information systems.	0.75
AK6 Demonstrates understanding of auditing principles, internal control systems, and risk management practices.	0.73
GK1 Demonstrates understanding of business law and other applicable legal frameworks.	0.73
GK5 Demonstrates understanding of numerical computation and quantitative analytical methods.	0.63
Total Variance	7.66
Percentage of Variance	42.42
Cumulative Percentage of Variance	73.40

Table 2 Component 2: Skills

Variables	Factor loading
IS4 Possesses practical experience in managing and archiving accounting records and supporting documents.	0.86
IS5 Possesses practical experience in applying accounting software for professional practice.	0.84
GS7 Demonstrates the ability to work effectively in a team and collaborate with colleagues.	0.80
IS6 Possesses practical experience in operating and managing office equipment for professional tasks.	0.79
IS3 Possesses practical experience in executing accounting procedures and practices.	0.79

GS10 Demonstrates adaptability to social settings and environmental conditions.	0.75
GS8 Demonstrates critical thinking skills	0.75
IS1 Possesses practical experience in handling taxation tasks.	0.74
GS9 Demonstrates commitment to lifelong learning, self-improvement, and staying informed of ongoing changes in technology and professional practices.	0.72
SS1 Demonstrates proficiency in English for effective communication in business and professional accounting settings.	0.71
SS7 Demonstrates the ability to apply auditing principles, internal control systems, and risk management practices in accounting tasks.	0.70
SS11 Demonstrates the ability to design research studies and apply statistical software tools for accounting research.	0.69
SS8 Demonstrates the ability to utilize accounting information systems effectively in accounting practice.	0.68
GS4 Demonstrates skills in using technology for work, including information communication, data retrieval, and presentation.	0.67
SS6 Demonstrates the ability to prepare financial reports in accordance with financial reporting standards.	0.66
GS5 Demonstrates skills in synthesizing information and media literacy.	0.66
GS3 Demonstrates the ability to plan work systematically and in an organized manner.	0.63
GS6 Demonstrates initiative and creativity.	0.63
IS2 Possesses practical experience in financial operations.	0.63
SS9 Demonstrates the ability to analyze accounting data to support business decision-making.	0.60
SS4 Demonstrates the ability to manage costs for business planning and operational control.	0.58
SS3 Demonstrates problem-solving skills for on-the-spot issues in accounting tasks.	0.57
SS5 Demonstrates the ability to calculate taxes and complete related tax forms.	0.56
SS2 Demonstrates the ability to integrate knowledge from other disciplines into accounting practice.	0.55
SS10 Demonstrates proficiency in using accounting software applications.	0.51
Total Variance	6.14
Percentage of Variance	22.75
Cumulative Percentage of Variance	65.90

Table 3 Component 3: Ethics

Variables	Factor loading
GE2 Does not cause harm to others.	0.86
AE9 Demonstrates transparency and adherence to laws, regulations, and professional standards.	0.85

Variables	Factor loading
AE7 Does not use information obtained through professional or business relationships for personal or third-party gain.	0.83
AE2 Demonstrates fairness and exercises professional judgment.	0.82
AE1 Demonstrates honesty and integrity in professional and business conduct.	0.81
GE1 Does not infringe upon intellectual property rights.	0.80
AE8 Complies with laws and regulations, avoiding actions that may harm the reputation of the accounting profession.	0.80
AE5 Performs duties diligently in accordance with professional standards.	0.78
AE6 Maintains confidentiality of information obtained through professional and business relationships.	0.78
AE3 Demonstrates independence, resisting undue influence from others in professional or business judgment.	0.76
AE4 Maintains and develops professional knowledge, skills, and expertise.	0.74
GE4 Demonstrates public-mindedness and social responsibility.	0.72
AE10 Does not conceal facts or misrepresent the truth.	0.67
GE3 Demonstrates discipline and punctuality.	0.65
GE5 Takes responsibility for the environment and society in accordance with sustainable development principles.	0.64
GE6 Complies with organizational and public rules and regulations.	0.64
Total Variance	6.97
Percentage of Variance	43.53
Cumulative Percentage of Variance	68.25

Table 4 Component 4: Character

Variables	Factor loading
AIUC5 Respects cultural and racial diversity.	0.85
GC2 Demonstrates assertiveness.	0.84
GC7 Demonstrates leadership skills.	0.82
AIUC1 Demonstrates selflessness and generosity, sharing with others.	0.79
AIUC3 Demonstrates enthusiasm and attentiveness toward service recipients.	0.78
AIUC2 Demonstrates diligence, perseverance, and resilience under pressure.	0.75
AIUC4 Provides professional services to the best of one's ability.	0.71
GC8 Demonstrates adaptability to change.	0.65
GC4 Demonstrates positive thinking.	0.61
GC6 Demonstrates thoroughness and attention to detail.	0.61
GC3 Demonstrates politeness, humility, and respect.	0.61
Total Variance	5.05
Percentage of Variance	36.07
Cumulative Percentage of Variance	63.36

The first-order confirmatory factor analysis of the desired accounting graduate characteristics, presented in Table 5, demonstrated that the model exhibited a satisfactory fit with the empirical data according to established criteria. The fit indices indicated a χ^2/df ratio below 4.00 and a p-value greater than 0.05, suggesting no statistically significant discrepancy. Both the goodness-of-fit index (GFI) and the adjusted goodness-of-fit index (AGFI) exceeded 0.90, while the comparative fit index (CFI) surpassed 0.97. Furthermore, the root mean squared residual (RMR) and the root mean square error of approximation (RMSEA) were below 0.05. All subcomponents satisfied the required thresholds, confirming the adequacy of the model. The findings indicate that the desirable accounting graduate characteristics comprise nine subcomponents: General Knowledge (GK), Accounting Knowledge (AK), Generic Skills for Lifelong Learning in the 21st Century (GS), Specific Skills (SS), Internship Skills (IS), General Ethics and Morality (GE), Accounting Ethics (AE), General Character (GC), and AIU Character (AIUC). These results demonstrate that the model is consistent with the empirical data and is appropriate for assessing the desirable characteristics of accounting graduates.

Table 5 Results of the First-Order Confirmatory Factor Analysis of Desired Accounting Graduate Characteristics

Good Fit Index	**χ^2/df < 4.00**	**p-value > 0.05**	**GFI > 0.90**	**AGFI > 0.90**	**CFI > 0.97**	**RMR < 0.05**	**RMSEA < 0.05**
GK	0.12	0.99	1.00	1.00	1.00	0.00	0.00
AK	1.29	0.24	0.99	0.95	1.00	0.00	0.04
GS	0.91	0.53	0.99	0.96	1.00	0.00	0.00
SS	1.27	0.16	0.97	0.93	1.00	0.01	0.04
IS	0.27	0.90	1.00	0.99	1.00	0.00	0.00
GE	0.40	0.67	1.00	0.99	1.00	0.00	0.00
AE	0.86	0.64	0.98	0.96	1.00	0.00	0.00
GC	0.31	0.91	1.00	0.99	1.00	0.00	0.00
AIUC	0.05	0.95	1.00	1.00	1.00	0.00	0.00

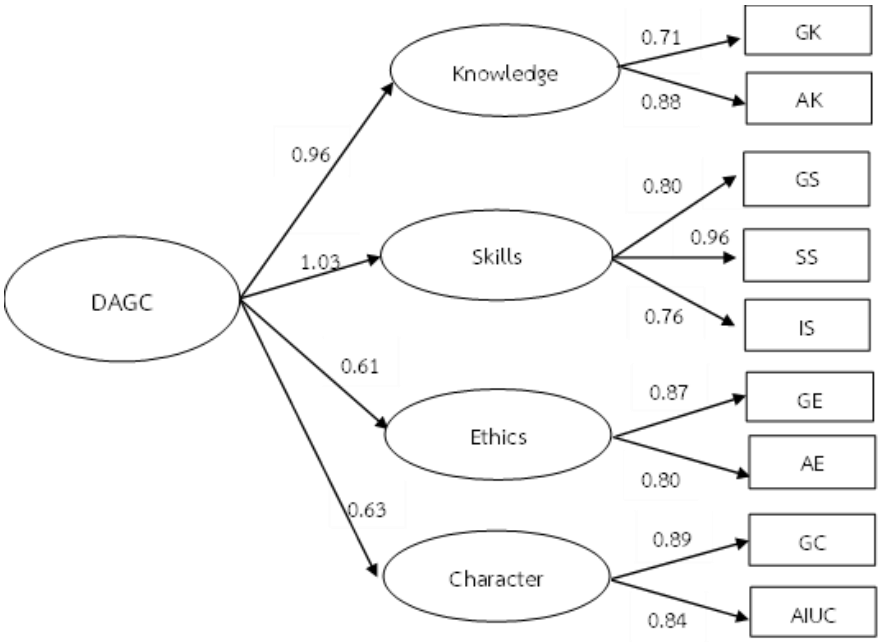
The composite reliability (CR) value must exceed 0.70 to be considered acceptable (Hair, Black, Babin, & Anderson, 2010). As shown in Table 6, the CR values for all latent variables in this study range from 0.87-0.95, indicating satisfactory reliability. In addition, the average variance extracted (AVE) value should be at least 0.50 (Kline, 2005). Table 6 shows that the AVE values range from 0.53-0.73, which meets the recommended threshold and confirms convergent validity. Discriminant validity was also assessed. The correlation coefficients range from 0.34-0.83, while the square roots of the AVE values (reported on the diagonal) range from 0.73-0.85 and are all below 1.00. These results indicate adequate discriminant validity. Consistent with the criteria proposed by Henseler, Ringle, and Sarstedt (2015) and Henseler, Hubona, and Ray (2016), values below 1.00 satisfy the requirements for discriminant validity.

Table 6 Construct Reliability and Validity

Item	Convergent Validity		Discriminant Validity								
	AVE	CR	GK	AK	GS	SS	IS	GE	AE	GC	AIUC
GK	0.60	0.90	*0.77*								
AK	0.73	0.95	0.62**	*0.85*							
GS	0.57	0.91	0.66**	0.73**	*0.75*						
SS	0.59	0.94	0.66**	0.83**	0.81**	*0.77*					
IS	0.66	0.92	0.47**	0.66**	0.61**	0.73**	*0.81*				
GE	0.53	0.87	0.39**	0.40**	0.57**	0.46**	0.38**	*0.73*			
AE	0.66	0.95	0.34**	0.44**	0.51**	0.47**	0.41**	0.68**	*0.81*		
GC	0.56	0.90	0.47**	0.46**	0.59**	0.54**	0.46**	0.69**	0.68**	*0.75*	
AIUC	0.61	0.89	0.40**	0.40**	0.54**	0.49**	0.44**	0.72**	0.64**	0.78**	*0.78*

** Correlation is significant at the 0.01 level (2-tailed)

The results from the second-order confirmatory factor analysis indicated that the model achieved an acceptable level of fit, with a Chi-square (χ^2) value of 8.29, χ^2/df ratio of 1.04, p-value of 0.41, Goodness of Fit Index (GFI) of 0.99, Adjusted Goodness of Fit Index (AGFI) of 0.95, Comparative Fit Index (CFI) of 1.00, and Root Mean Square Error of Approximation (RMSEA) of 0.01. These results suggest that the second-order confirmatory factor analysis model for the desired characteristics of accounting graduates demonstrated a satisfactory fit to the empirical data. The model consists of four constructs: knowledge, skills, ethics, and character which can be used to assess the desired characteristics of accounting graduates, as shown in Figure 2.



χ^2 = 8.29, df = 8, χ^2/df = 1.04, p = 0.41, GFI = 0.99, AGFI = 0.95, CFI = 1.00, RMSEA = 0.01

Figure 2 Results of the second-order confirmatory factor analysis of the model of desired accounting graduate characteristics

6.5 Qualitative research findings

In-depth interviews were conducted with 14 participants, including employers, entrepreneurs, and alumni, to identify the desired characteristics of accounting graduates deemed essential for effective performance within organizations. Analysis of the data revealed four main dimensions. Frist, knowledge encompassed expertise in finance, law, taxation, and professional accounting practices. Second, skills included computer literacy, English proficiency, self-development, and ongoing professional learning through engagement with technological advancements and training programs, as well as teamwork, problem-solving, communication and presentation, analytical thinking, systematic planning, adaptability, and proficiency in accounting software. Third, ethics were reflected in integrity, honesty, and organizational responsibility. Finally, character comprised good conduct, humility, selflessness, responsibility, meticulousness, self-confidence, leadership, a positive attitude, punctuality, diligence, and perseverance. These findings provide a detailed profile of the competencies and qualities expected of accounting graduates in professional practice.

7. Conclusion and Discussion

The analysis of desired characteristics of accounting graduates indicated that the ethics dimension received the highest mean score, followed by character, knowledge, and skills, respectively. At the sub-dimension level, professional accounting ethics scored highest, followed by general character, AIU character, morality and ethics, professional knowledge, practical work experience skills, 21st-century lifelong learning skills, professional skills, and general knowledge. All components were rated at a high level. The prominence of professional accounting ethics suggests that stakeholders, including employers, entrepreneurs, and alumni, place greater emphasis on producing graduates with strong ethical standards and professional conduct than on other competencies. This finding is consistent with previous studies by Sripan, Anantasophon, Siriprapim, and Na Loumpool (2018) and Sukkaewmanee (2016), which reported that ethical qualities, such as honesty, fairness, and professional ethics, are more highly valued by employers in accounting professionals than knowledge, technical skills, or personal traits.

Threrfore, higher education institutions should prioritize the integration of ethics and professional accounting conduct into their curricula. As accounting is central to the functioning of every organization, even accountants with exceptional knowledge and technical skills may cause serious organizational harm if they lack strong ethical standards and professional integrity.

The confirmatory factor analysis revealed that the desired characteristics of accounting graduates consist of four main dimensions, measured through 65 observable variables: knowledge, skills, ethics, and character. The knowledge dimension encompasses general knowledge and professional knowledge. This finding aligns with the studies of Chanowan (2023), Dulanee and Eapsirimetee (2019), and Sukkaewmanee (2016), which indicated that knowledge in economics, organizational and business management, finance, marketing, law, numerical and statistical analysis contributes to the development of desired accounting graduate characteristics. In terms of professional knowledge, the results are consistent with Gunnarapong, Binyasen, Rodjun, and Polinhom (2023) and Khuma, Thipwiwatpotjana, and Bootnoi (2020) who emphasized that knowledge in accounting practices, internal auditing, auditing, and taxation is critical to shaping the desired characteristics of accounting graduates.

The skills dimension includes 21st-century lifelong learning skills, professional skills, and practical work experience skills. This is consistent with the findings of Chaiya (2019), Jindanil and Chitsakul (2023), and Noimala (2021) who highlighted that 21st-century lifelong learning

skills involve the ability to acquire knowledge without constraints of time or place, thereby fostering continuous self-development. These skills encompass analytical, synthetic, and critical thinking, creative and innovative thinking, information literacy, self-directed learning, teamwork and interpersonal skills, information technology proficiency, and communication skills.

Furthermore, the findings of Butsalee, Rakkarnsil, and Sawaengwarot (2022) and Khuma, Thipwiwatpotjana, and Bootnoi (2020) align with the professional skills dimension, emphasizing the application of knowledge in practical accounting tasks, problem-solving, decision-making, and the exercise of professional judgment. This includes proficiency in using accounting software, numerical calculations, risk analysis, planning and control, and report preparation. The practical work experience skills dimension reflects competencies acquired through hands-on experience in organizational settings. The ethics dimension comprises morality and ethics as well as professional accounting conduct, consistent with the findings of Kumchuen (2023) and Sukkaewmanee (2016). General ethical behavior, beyond professional accounting conduct, encompasses honesty and moral integrity. Professional accounting ethics aligns with standards set by the Federation of Accounting Professions under the Royal Patronage of His Majesty The King (2019), as well as studies by Butsalee, Rakkarnsil, and Sawaengwarot (2022), Gunnarapong, Binyasen, Rodjun, and Polinhom (2023), Rodjam and Mungsing (2019), and Sripan, Anantasophon, Siriprapim, and Na Loumpool (2018). The fundamental principles that accounting professionals are required to follow are those set forth by the Federation of Accounting Professions. These include professional and business integrity, fairness and independence, competence, diligence, adherence to professional standards, confidentiality, ethical conduct, and transparency. In addition, personal characters encompass both general traits and those specific to AIU. Consistent with the views of Gunnarapong, Binyasen, Rodjun, and Polinhom (2023) and Sukkaewmanee (2016), these qualities include personality, character, leadership, caution, and meticulousness.

8. Research Recommendations

In the future development of accounting curricula, educational institutions should design programs that comprehensively address four key domains: knowledge, skills, ethics, and character. Special emphasis should be placed on ethics and professional accounting standards, as these are identified as the most highly valued by employers, alumni, and other stakeholders relative to the other domains. Strengthening these areas will enhance the desired characteristics of accounting graduates, ensuring they effectively meet the expectations and needs of all relevant stakeholders.

9. Recommendations for Future Research

9.1 Subsequent studies should investigate additional factors beyond the conceptual framework employed in this study to capture components that more accurately reflect the changing contexts of different organizational settings.

9.2 Future research is encouraged to utilize structural equation modeling (SEM) to rigorously validate the proposed model and examine the directional relationships among the variables.

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