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Article

Educational Ecology Factors Management Model for The Development of Student Quality in Private Higher Education Institutions in Bangkok

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Abstract

The purpose of this research was to 1) investigate the educational ecological factors of a private higher education institution in Bangkok, 2) develop a management model to develop the quality of students, and 3) evaluate the appropriateness and feasibility of the management model of educational ecological factors to develop the quality of students in a private higher education institution in Bangkok. The research and development methodology was applied in 3 phases: 1) Investigating the educational ecological factors to develop students' quality. The sample size was determined by the G*Power program with a sample of 395 respondents. 2) Development of the management model with the help of seven experts. 3) Exploring practitioners' opinions on the appropriateness of the management model of educational ecological factors on student quality development in private higher education institutions in Bangkok. The practitioners were selected through purposive sampling. The results show that 1) the path coefficient is 0.987, the t-statistic is 589.682, a statistical value significantly higher than the critical value (1.96), and the p-value is 0.000, $R^2 = 0.975$, indicating that educational ecology has a positive direct impact on student quality and is statistically significant. According to the conceptual framework of the research, there are three independent variables: student educational ecology, student affairs, and institutions that have a positive impact on student quality. However, since these independent variables are highly correlated, they cause a collinearity problem. Therefore, the problem is solved by using these independent variables as indicators or observed variables for the latent variable of educational ecology. Overall, the results of the hypothesis tests showed that these latent variables have a positive effect on student quality. Therefore, all three independent variables have a positive effect on student quality. 2) The management model of educational ecology factors to develop student quality in private higher education institutions in Bangkok has four components: students, student affairs, and educational institutions. 3) The evaluation of appropriateness and feasibility showed a high level.

Keywords

Management Model, Educational Eco-Factor, Student Quality, Ecological Factors, Higher Education Institutions.

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Introduction

Higher education institutions play a crucial role in developing student potential to produce graduates with desirable characteristics and quality, including skills necessary for 21st-century challenges in the era of globalization. The National Qualifications Framework for Higher Education (TQF: HEd) emphasizes a comprehensive approach to student development through four key learning outcomes: knowledge, skills, ethics, and personal attributes (Pornphol & Chittayasothorn, 2017). This approach acknowledges that student success is based on hard skills, which are reflected by their curriculum and academic record, and soft skills, which are achieved by activity and social life experiences. However, modern educational systems generally focus on measurable competencies and marketable skills while leaving important aspects of human-social skill development behind; hence, the need for an integrative model that combines skill acquisition in response to market demands and skill acquisition based on critical thinking and formation (Zovko & Dillon, 2017). Student development refers to the ways students grow, develop, or enhance developmental skills in higher education (Caldwell et al., 2020; Choi et al., 2021), which includes a variety of organized services, for instance, counseling, scholar support, career guidance, and student organization activities that contribute to the development of the whole person and his or her qualification through both academic and extracurricular involvement (Spychalski, 2023).

Educational ecology is a concept that provides a comprehensive perspective to explain the progression of higher education students. Educational ecology adopts a perspective on the ecological systems created by Bronfenbrenner, in which the relationships between students and their various ecological systems of the environment take a dynamic approach, with the family, school, and society being the most predominant sites. This context-based view consists of three basic dimensions: student-level, student affairs-level, and institutional-level factors are considered, and they have been known to contribute to the development of student quality. Student development, as has been found, is not an occurrence in a vacuum, but it involves purposeful and deliberate contributions of students, student affairs professionals, and institutions, and the convergence of such diverse experiences students make the issue of a synergy between the support units on the institutional level and institutional culture even more important (Yao & George Mwangi, 2017). The theory puts a focus on the extent to which students can integrate past and future educational experiences in higher education in respect of such multidimensional engagements since adaptation to higher education and their achievement in higher education is hardly self-evident. Ecology of education, hence, is the environment relation of environmental factors that shape the cognitive development, personal growth, and learning success of students during college life (Alfirević, Arslanagić-Kalajdžić, & Lep, 2023).

The private higher education market in Bangkok has experienced incredible growth in the past decades, filling the gap left by the public sector's inability to meet the increasing demand (Crocco, 2018). These organizations cater to diverse student populations and offer a variety of programs to meet the academic needs of the region in Thailand's fast-paced socio-economic hub. But private colleges have an extremely challenging task in preserving and upgrading the quality of undergraduates. Some of the main issues that inhibit the capacity to innovate are differences in the quality of education among higher education institutions, constraints in terms of resources in comparison to public universities, limitations in the development of the faculty, lack of compatibility between curriculum and industry, few industry partnerships, and an inability to adapt to advances in technology and digital learning environments (Albulushi, 2024; Vicente et al., 2020). These burdens are complicated by socio-economic aspects and cultural norms that do not correspond to the current employer needs from the fast-paced digital economy. The literature highlights the importance for graduates to have a blend of technical capabilities and soft skills for success in a contemporary workplace, such as the need for the intentional development of communication skills, emotional intelligence, teamwork skills, and leadership skills (Fuller et al., 2018; McLaughlin et al., 2022).

Student quality at private higher education institutions is influenced by environmental issues that can best be viewed through Bronfenbrenner's ecological systems model. At the system level, schools confront constraints like lack of access to trained instructors, insufficient support services, and few opportunities for experiential learning. Mesolevel barriers involve poor collaboration with industry and insufficient family-school engagement, despite evidence that both WIL and industry-engaged extracurricular activities increase students' confidence to transfer skills and succeed in the workplace (Jackson, Fleming, & Rowe, 2019). Ecosystem factors include inadequate government support and economic obstacles to access to education. Macrosystem influences

include societal beliefs, which could undervalue private education, and a disconnect between the education system and labor market requirements, where universities need to train generic skills, such as graduate identity, in addition to traditional academic subject matter, to survive the requirements from employers (Jackson, 2014). Finally, chronosystem dimensions also feature rapid technological developments and changing government policies, which lead to continuous adaptation processes for service providers.

Even though the educated ecological factor is an influential factor in student development, little has been studied about the effect of this factor on the student quality in private higher education institutions in Bangkok. Private higher education institutions under the Thai context have received less attention in studies that examine the technological integration for student quality development and hybrid learning's effectiveness. Overall, there is limited longitudinal research on how characteristics of the environment influence the academic and career pathways of students over time, especially given that competence-based curricula provide authentic learning environments and opportunities for self-directed learning that can support students who engage deeply to integrate diverse forms of knowledge (den Hertog & Boshuizen, 2021). Additionally, research on socioeconomic inequalities' effects on educational access and quality, industry-academia partnerships in Bangkok's growing sectors, and the application of Bronfenbrenner's ecological framework specifically to private higher education institutions remains inadequate. According to the cases of various countries, universities are now adjusting the governance structure in favor of including industrial representatives in decision-making to cultivate a shared governance structure in which student learning and participation are driven through connected relationships and mutual cooperativeness (Henderson & Trede, 2017). These differences illustrate the importance of more thorough context-specific investigations to elucidate the ways in which ecological contexts shape student development in this novel educational setting.

In response to the gaps found in the literature review, the present study aims to produce a complete ecological management model of private higher education institutions in Bangkok. This study explores the ecological-related educational factors as the factors contributing to the qualitative development of students, synthesizes the model of leadership with these educational ecological factors, and verifies the validity and applicability of the model. The anticipated results will include the empirical evidence of the educational ecology influencing student quality, the validated management model that is able to be used in a realistic way in private higher education, and the evidence-based proposals to enhance student development in practice. This research contributes significantly to the limited body of knowledge on educational ecology in private higher education institutions, particularly in the Southeast Asian context, where effective governance is crucial for fostering sustainability through leadership commitment, supportive culture, and engagement in development initiatives (Leal Filho, Salvia, & Eustachio, 2023). The findings can provide policy instruments to policymakers, teaching administrators, and student affairs practitioners with more fruitful means to help shape the quality of students. It can also serve as a practical guide to consider the best practices in managing the educational environment. This can help institutions successfully prepare graduates to meet the demands of the 21st-century economy with interdisciplinary collaborative educational strategies that make learning experiences broad, deep, and holistic (Thana, Tini, & Ratu Bulkis, 2022).

Conceptual Framework

This study examines the concept of educational ecological factors, which encompasses students, student affairs, and institutions. The research is grounded in Urie Bronfenbrenner's ecological systems theory (1917-2005) (Ceci, 2006), Smith's societal influences on educational institutions (Smith, 1966), and contemporary student development frameworks, particularly the national qualifications framework for higher education, which emphasizes a comprehensive approach to student development according to learning outcome standards (Pornphol & Chittayasothorn, 2017).

The Thai Qualification Framework for Higher Education (TQF: HEd) is the national framework in Thailand used to set learning outcomes at higher education institutions. This framework fosters whole student development within four core areas that are consistent with current approaches to education that are focused on the development of professional as well as human-social skills (Mitchell et al., 2019; Zovko & Dillon, 2017). The four dimensions, which are knowledge including factual knowledge, conceptual knowledge, procedural knowledge, and knowledge applying; skills covering cognitive, practical; and experiential learning ability including critical

thinking, complex problem solving, teamwork, and leadership capability to enable learners successfully coping with the dynamic complexity environment and handling complex situations (Fuller et al., 2018; McLaughlin et al., 2022), ethics including moral standard and social responsibility, which makes students honest and integrity and ethic judgment, contributing to citizenship, social behavior, and professional ethics, and personal characteristics including self-discipline, responsibility, emotional stability, self-confidence, adaptability, and such kind of quality for their personal success and professional success (Jackson, 2014; Jackson et al., 2019).

Bronfenbrenner's ecological systems theory forms the congenial structure of this investigation inasmuch as it reflects both a meta scientific grasp of human development and concerns social influences in developmental processes (Ceci, 2006). The model is predicated on the belief that student development is the result of both in situ encounters and broader social environments and must be addressed by multiple stakeholders in coordinated ways (Caldwell et al., 2020; Yao & George Mwangi, 2017). The theory incorporates five interrelated systems: (1) microsystem that includes the immediate environment like college, peers, teachers, and family where direct interaction for student learning and skills acquisition happens, and is the primary system where student knowledge and skills are created; (2) mesosystem that refers to the relationship between microsystems, and examines how interconnected systems jointly affect the individual's characteristics and moral development; (3) exosystem, which consists of indirect environmental influences such as university-level policies, faculty development activities, and community activities that influence student learning and the physical environment without direct student involvement; (4) macrosystem which is a broader cultural, economic, and social context in which schools and universities operate, including the national and world economy, social expectation, and cultural norms that affect higher education and student learning; and (5) chronosystem that deals with the changes over time that affect student life, including technology, education standard shift, and personal life transition (Charungkaittikul & Henschke, 2014; Yoder & Bicksler, 2012).

Recent works indicate that successful educational governance needs leadership commitment and enabling environments to foster stakeholders' development, and a supportive institutional culture and systematic involvement in development schemes help to foster quality development of students (Henderson & Trede, 2017; Leal Filho et al., 2023). Competence-based curricula, which promote authentic learning environments and independent learning, help students bring together types of knowledge and train for complex occupational challenges by combining theoretical concepts with practical application (den Hertog & Boshuizen, 2021; Thana et al., 2022).

Theoretical framework Smith (1966) argues that education is a monster and is deeply influenced by forces external to the education sector, which affect educational expectations and outcomes, and that education does not exist in a vacuum. There are several major dimensions affecting the effectiveness of education: Firstly, economic contexts play a significant role in learner attitudes and bring with them labor market conditions, the skill needs of industry, and the economic dynamism of the region, determining the content and delivery style of education, for example, the digitization of the economy requires skills in information technology and the entrepreneurship mindset to be developed so that the labor force is able to adapt and compete in such a changing economic environment (Lusardi & Mitchell, 2014); secondly, technological progress requires educational institutions to innovate teaching methods including the application of knowledge on global telecommunications technology to ensure learners are prepared for the global labor market, especially higher education institutions where knowledge on technological transfer and global industry signals is critical (Farias-Gaytan, Aguaded, & Ramirez-Montoya, 2023); thirdly, cultural and societal expectations influence the practice of education with social norms and the natural environment shaping behavior, morality and the development of personality of the individual whereas the scenario of a culture affects the upbringing of an ethically responsible and community-oriented environment; and finally, globalization contributes external aspects that can be international education standards, the requirement of the global labor market or as a foreign concept that directly affect private higher educational institutions in Bangkok pressing on the challenge to model a graduate who can compete in the world without losing their culture and values (Kennedy & Stevenson, 2023; Spychalski, 2023).

This holistic theory of developmental systems combines the TQF: HEd emphasis on student learning outcomes, the Bronfenbrenner model of ecological systems to explain multiple influences on the development of students, and Smith's societally relevant approach to explain the influence of systemic phenomena. Such integrative approaches not only facilitate knowledge and didacticism but also help in developing the professionalism of students. They need to mediate between divergent professional comprehensions and experience more general, profound, and unified learning experiences (Filges et al., 2022). This comprehensive development provides insight

into effective approaches that can enhance the quality of students in private higher education institutions in Bangkok. It aims to incorporate academic performance with ethical, personal, and social aspects of students' maturation and sustainability, equipping graduates with globalized, multi-faceted career patterns.

The research method is research and development. The sample group includes 395 students from private universities in Bangkok (third year of study). The sample group was selected by stratified random sampling. The instruments used consisted of 1) 13 measurement forms for independent and dependent variables, which are combined assessment forms with item-total correlation values (r) ranging from .121 to .919 and reliability calculated by coefficient alpha (a) ranging from .801 to .896. 2) A questionnaire to evaluate the management model of educational eco-factor to develop the quality of students in a private college in Bangkok, an evaluation questionnaire (Figure 1).

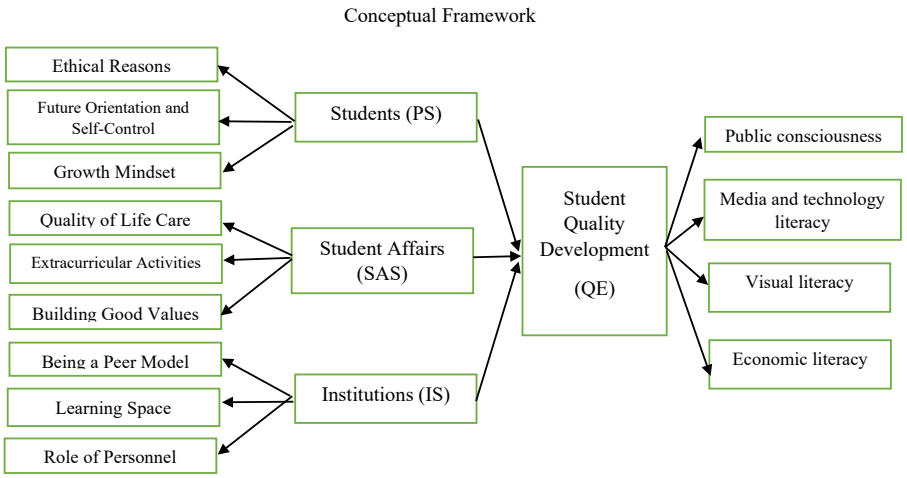

Figure 1: *Conceptual Framework.*

Research Methodology

The data analysis in the first phase of the study is quantitative data. Statistical analysis is an explanation of the relationship of latent variables according to all hypotheses with the structural equation model (SEM) through the PLS-SEM method using the Smart PLS GmbH application, which focuses on testing the influence between latent variables. Through the prediction coefficient of the latent variables and the causal relationship between the latent variables (Sohail & Chen, 2022).

The second phase of the research is to ask 7 experts for their opinions or suggestions on the feasibility of applying the model for student quality in private higher education institutions in Bangkok. The proposed management model for environmental education factors includes four aspects of participatory management: P-D-C-A x 4Ms.

The third phase of the research is to investigate the opinions of natural practitioners on the appropriateness of the management model educational-ecological factors to develop student quality of private higher education institutions in Bangkok. The actual practitioners' study and then fill out the questionnaire to evaluate the appropriateness and feasibility of the model. The main instrument is the 5-level evaluation method. The researcher determines the weight of the items. There are five response options, from the highest at level 5 to the lowest at level 1. The content analysis, percentage analysis, mean analysis, standard deviation analysis and evaluation results were compared in each area with criteria not less than 3.5, which sets the score for the opinion area at five levels.

Results

The Causal Factors in the Development of Student Quality at the Private Higher Education Institutes in Bangkok

It was found that the path coefficient is 0.987, the t-statistic is 123.29, a statistical value more significant than the critical value (1.96), and the p-value is 0.000 (Table 1 and 2), indicating that educational ecology has a

positive direct impact on student quality that is statistically significant. According to the research framework, there are three independent variables: student educational ecology, student affairs educational ecology, and institutional educational ecology, which have a positive influence on student quality. However, since these independent variables are highly correlated, they cause a collinearity problem. Therefore, the problem is solved by using these independent variables as indicators or observed variables of the overall latent variable of educational ecology. The results of the hypothesis test show that these latent variables have a positive influence on the quality of students. Therefore, all three independent variables have a positive effect on student quality.

Table 1: *Correlations of Variables.*

	PS	SAS	IS	QE
PS	-	.971*** (.000)	.986*** (.000)	.987*** (.000)
SAS		-	.973*** (.000)	.965*** (.000)
IS			-	.985*** (.000)
QE				-

*** p-value < .001

Table 2: *Multiple Regression Analysis of Educational Ecology.*

Factor	b	Std. Error	β	t	Sig
Constant	-.273	.043		-6.43	.000***
Educational Ecology	.352	.003	.987	123.29	.000***

R^2 = .975, Adjusted R^2 = .975, F = 152.00, Sig. = .000***

*** p-value < .001

Develop the Management Model of the Educational Ecological Factors to Improve the Student Quality of Private Higher Education Institutes in Bangkok

Management model on educational ecological factors to develop the quality of students in private higher education institutions in Bangkok, the model consists of four components: public consciousness, media and technology literacy, visual literacy, and economic literacy

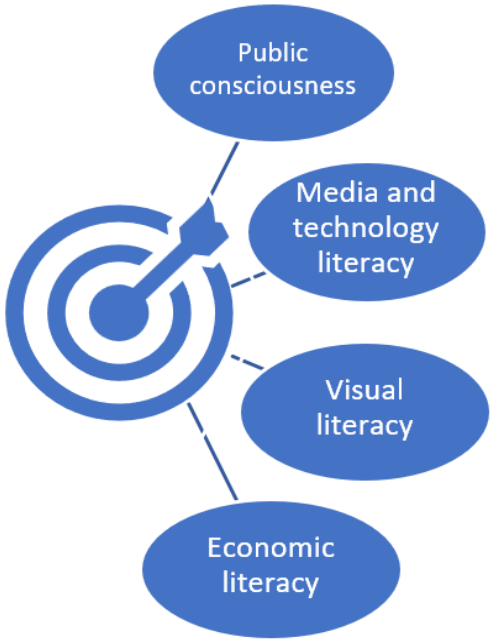

Figure 2: *Management Model of the Educational Ecological Factors.*

To Evaluate the Appropriateness and Feasibility of the Management Model of the Educational Ecological Factors in Developing Student Quality at the Private Higher Education Institute in Bangkok

The assessment of the appropriateness and feasibility of the management model of educational ecological factors to develop student quality of private higher education institutes in Bangkok revealed that the management model of educational ecological factors to develop student quality of private higher education institutes in Bangkok is highly feasible, with a score of no less than 3.5, indicating that the managers of the private higher education institute have consistently assessed the feasibility of the model, with the element with the highest average score being component 3: Educational Facilities and component 2: Student Affairs having the lowest average score (Figure 3). 2) The management model of educational ecological factors to develop student quality of private higher education institutes in Bangkok is beneficial, with a score of no less than 3.5, indicating that the managers of the private higher education institute have consistently evaluated the usefulness of the model, with the element with the highest average score being component 3: educational facilities, and the 2nd component, student affairs, having the lowest average score.

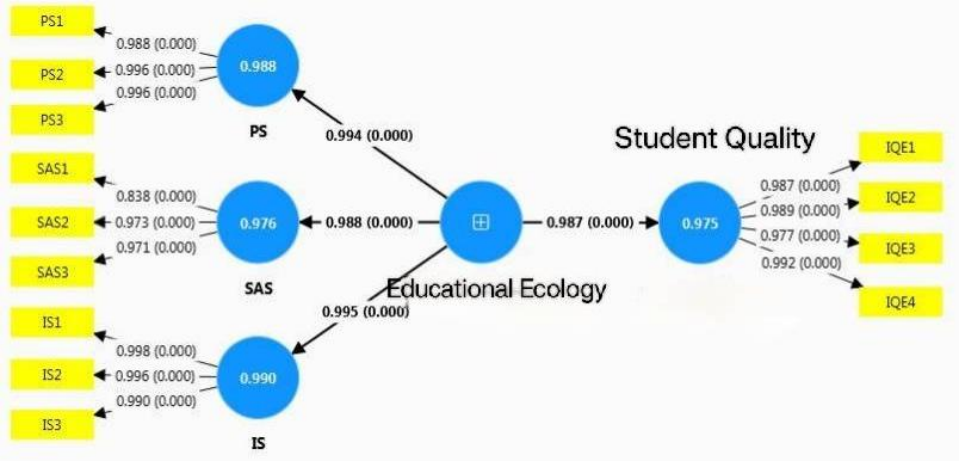

Figure 3: *The Appropriateness and Feasibility of the Management Model of the Educational Ecological Factors.*

Discussion

The educational ecological factors that affect student quality in private higher education institutions in Bangkok are composed of three blurred dimensions: students, student affairs, and higher education institutions, which have a positive influence on student quality. These three dimensions, in combination, help to create quality students by offering complete support networks, addressing personal development needs, and creating conducive learning environments that enable not just learning but also growth. This finding is consistent with current views that student development includes the wide range of processes through which students develop, advance, and increase their developmental capacity over the course of their time in higher education (Caldwell et al., 2020; Choi et al., 2021). This interconnected nature of the dimensions is consistent with the understanding that student development is not an isolated process; it is an orchestrated endeavor with the characteristics of students, the support systems of the institution, and the organizational environment of the college or university functioning in concert to create an environment that is conducive to learning. According to Yao and George Mwangi (2017), for international students, student development cannot be separated from the contributions of the students, student affairs practitioners, and institutions of higher education. The contrasting experiences of the international students underscore the need for institution-based support mechanisms to be mutually supportive to an organization's context. Combined work of this kind is necessary to meet the complex demands of international students, facilitating their adaptation to and integration within the new campus context, as various authors in the special issue have noted. Student development, according to MacFarlane (2018), for those from disadvantaged backgrounds, constitutes a multifaceted experience of transitioning from school to higher education and the resultant changes in identity as a learner. Pre-entry experiential learning in a university context allows for the development of this by enabling the development of academic socialization, social relationships, and belonging. Such factors promote a formative learner's identity in higher education, allowing students to have a positive

experience of transitions and ongoing development within their academic sojourn. Moreover, the Thai Qualifications Framework for Higher Education 2022 (TQF: HEd) also supports such a holistic approach by setting a set of learning outcome standards throughout four indispensable domains: knowledge attainment, skill enhancement, value and intuition renovation, and personal characteristic enhancement, which ultimately affects how the development of students and the quality of graduates are steered and resulted from the systematic improvement mechanisms employed by higher education institutions (Pornphol & Chittayasothorn, 2017).

Model development through expert focus group discussion of the management model the management of the development model indicates that the ecological educational factors model consists of three components that have significance for improving the quality of the students of the private higher education institutions in Bangkok. The first element focuses on student-centered dimensions, comprising four crucial sub-dimensions that combine to foster holistic student development: first, developing desired graduate attributes involves the cultivation of logical thinking skills alongside digital and media literacy competencies, which include technical skill development and information literacy, visual literacy, communication skills, as well as social awareness (González-Zamar, Abad-Segura, & Ademar Ferreyra, 2023; Pornphol & Chittayasothorn, 2017) second, transforming students into responsive change leaders involves blending knowledge acquisition and moral development, producing graduates who can engage the contemporary world with competent and moral integrity; third, promoting a comprehensive university life experience involves crafting seamless learning environments that merge academic work with personal development opportunities; and finally, aligning students' daily experiences through harmonizing curriculum which span education inside the classroom and experiential learning experiences outside the classroom allows for holistic development that bridges between theoretical learning and practical application. These four sub-dimensions combine to give a complete picture to oppose the traditional dichotomy of professional and human-social skills development, which would assume an approach in which the faculties and the staff unite to ensure the success of the students (Mitchell et al., 2019; Zovko & Dillon, 2017). A student development whole person approach is complementary to the daily learning process by virtue of the integration and inoculation of student development into the curricular frame and the establishment of total support frames that are supportive of success in total engagement, in an academic and extracurricular sense (Filges et al., 2022; Spychalski, 2023). It is more involved with instruction rather than the traditional approach to considering the power of understanding/training that enhances the professional level of students and strengthens human and social abilities (Kennedy & Stevenson, 2023; Thana et al., 2022). This perception fits the efforts of den Hertog and Boshuizen (2021), who demonstrate that competence-based curricula create realistic learning environments and encourage students to engage in self-regulated learning, both of which enable those students that immerse themselves in the curriculum to bridge various knowledge domains when planning to respond to complex and workplace situations by integrating both theory and enactment knowledge.

The second element deals with student affairs, which involves three crucial dimensions as per the holistic approach in student development as in TQF: HEd. To create a platform of knowledge and experience in shaping students with the desired graduate attributes, one must first establish systematic networks to facilitate learning alongside one another as well as with others, such as peer-to-peer learning. This would involve the implementation of formalized mentoring schemes, organization of student-led forums, and the creation of online spaces where students can discuss personal and academic achievements and professionalism. These platforms will enable students to develop multiple perspectives and the four components of literacy, including public awareness, media and technology literacy, visual literacy, and economic literacy, as will be ascertained in this current research study. Additionally, a combination of co-curricular and extracurricular activities with curricular activities is essential in planning activities inside and outside the classroom for whole child development. This may involve a variety of service learning projects that raise awareness in the community, technology-based learning processes that enhance digital competency, or community service projects that promote social responsibility. Third, emphasizing a balanced approach to soft skills alongside hard competencies is also a response to the urgent requirement for graduates to have a combination of technical skills as well as the so-called ‘people’ skills that are increasingly recognized as vital to success in a contemporary workplace. The present study affirms the research of Jackson et al. (2019) in echoing their advocacy for developing students’ transfer abilities in a holistic manner where knowledge-sharing platforms are constructed and co-curricular activities are embedded in students’ learning. It demonstrates the importance for educators to supplement learning with work integrated learning and extracurricular activities, especially those involving industry. It also finds that both paid

work and volunteering increase students' confidence in skill transfer and that soft skills and hard skills are equally important for labor market success. Furthermore, Jackson (2014) highlights the significance of generic skills and graduate identity, corresponding to the formation of knowledge-sharing platforms for the development of graduate attributes. It demonstrates the importance of higher education in developing non-cognitive as well as academic skills sought after by employers. It also implies the inclusion of co-curricular developments to enrich skills and skill set dimensions, including the soft skill and hard skill balances, so as to strive and support the new graduates in being work-ready and employable in the competition-laden job market. As a result, student affairs professionals are oriented to create programs that intentionally integrate core communication capacities with emotional intelligence, the capacity to work in teams, and leadership ability that align with, rather than work against, learning outcomes associated with academic tasks, thereby preparing university graduates for the complex requirements seen in global careers (Fuller et al., 2018; McLaughlin et al., 2022).

The third element refers to institutions for that education, composed of six dimensions that reinforce each other and meet the conditions for a conducive context for quality development. First, institutional leadership comprises university councils, presidents, and executive teams who set forth a clear vision, mission, and strategic directions for student success by way of holistic policies and budget allotments that support the implementation of ecological factors. Faithful leadership communicates the university-wide significance of student development and promotes shared governance. Second, organizational culture incorporates shared attitudes, values, beliefs, and practices about the way in which teaching and learning are organized as for student-centeredness, where faculty and staff share the responsibility for student learning and are engaged actively in the process of developing nurturing environments. This is the culture that is demonstrated by frequent professional development and acknowledgment programs, among which student development contributions have value. Third, students' learning is centered on best practices in teaching that emphasize active learning, critical thinking, and application of knowledge to real-world challenges using technology-enhanced instruction and experiential learning. Fourth, there is a need for systematic collection and analysis of data on student engagement to gain insights into the goals students are pursuing and their degree of success, with the ability to target interventions to improve motivation and promote retention. Create ecosystems to support learning for change. In this regard collaborative networks are designed between different networks of collaborators involved, for instance, industry partners, community organizations, and government to situate a diversity of learning opportunities. Sixth, the networks of educational institutions will facilitate inter-institutional sharing of resources, best practices, and expertise that will allow smaller institutions of higher education to avail themselves of extensive facilities and collaborative research opportunities both within and outside the institution itself, to develop the ability to offer a quality education and graduate change leaders who are well-grounded professionally and morally. This research aligns with that of Henderson and Trede (2017), who observed that higher-education institutions are building collaborative governance structures that involve university, industry, and student stakeholders in joint decision-making processes to ensure stronger student learning outcomes and work-integrated learning. This participatory method facilitates the development of quality by creating structures, processes, and results that influence commitment, mutual comprehension, and trust among all stakeholders. The emphasis on collaborative governance and cooperative practices of these institutes as a learning ecosystem fosters a culture of student capability, graduate employability, and workplace learning and culture, thus favoring the achievement of the intended learning outcomes and quality of work-based educational experiences. Leal Filho et al. (2023) also explained that institutional governance plays a critical role in higher education institutions to ensure sustainability, retreat, assail leadership support, inculcate sustainability culture, and engage in sustainable activities. It highlights the necessity of underpinning faculties and diversity of governance, which is in contrast to a plurality of initiatives. The combination of these creates an enabling environment for the quality development of the student to grow and is more likely to facilitate the incorporation of the SDGs with teaching research activities and campuses, thereby enhancing the quality of education. Charungkaittikul and Henschke (2014) elaborate on some of the most significant agents of a sustainable learning society in Thailand, namely, leadership, culture, and engagement. It also highlights the need for powerful collaboration and networking among educational institutions to develop a lifelong learning environment. Long-term commitment to learner development and changing ecosystems is essential to enhance quality learning and ensure that the various members of our societies can exert themselves in learning that enhances their lives and shares the whole society. More so, according to Yoder and Bicksler (2012), the concept of teaching commons through institutional arrangements requires the perception of

leadership, cultural aspects, and socio-political processes in terms of resource management. Students interface with local communities and learn of norms, institutions, and power dynamics that regulate access to resources. This learning-through-experience process ensures a deeper understanding of institutions and that the writing has meaning for the students in their regular setting. The structure of the course encourages participants to reflect on their own backgrounds and experiences and enables them to engage in a transformative learning experience in which theory is linked to practice in a variety of ecological contexts. Cumulatively, these results reinforce the assertion that institutional effectiveness demands systemized governance, community networks, and stakeholder involvement for the sustainability of the environment for student quality enhancement.

In this research, the model of the management model of educational ecology factors for students' quality development in private universities in Bangkok is 4 elements: public stalking consciousness, media and information technology literacy, visual literacy, and economic literacy. The first dimension is public consciousness, and it refers to the collective awareness or responsibility for social problems and is very much related to the student's maturity level. Similar work was done by Alfirević et al. (2023), in their examination of social responsibility and civic engagement in higher education. They have emphasized the role of public awareness incorporated in programs on the students' behaviors with the goal of taking care of the responsibility for the people and the regional and world problems. It is not only evident in the current management model, but it also highlights the significance of the fact that by enhancing public awareness with respect to promoting and nurturing well-educated students who are able to consciously identify the role they play in existing society, it will be achieved, and further, that it will contribute to improving students' comprehensive ability. Second, with the instantaneous dissemination wrought in this era, media and technology literacy is required given the digital age in which all people currently reside, which has implications for higher education. Farias-Gaytan et al. (2023), indicate media literacy is key in the digital age; in the case of university education, it has to do with the use of technology and the critical capacities of the end users. Although little research has been conducted to empirically investigate the topic of media literacy, the findings have indicated that there is a significant area of research that can be utilized to trace the development of media literacy, taking into consideration the dynamics of technological and pedagogical changes that educators and learners must adapt to. Moreover, everyone is in the digital era, and the ability to read, comprehend, and create visual symbols and resources, such as visual literacy, has never been more significant in education and the digital era of information where visual representation has emerged as the most common means by which information is exchanged. Visual literacy can offer solutions to this population to learn well, think critically, and communicate effectively through their experiences in the landscape of heterogeneous information. The authors Hattwig et al. (2013) mentioned the significance of visual literacy skills of 21st-century learners as the ability to locate, interpret, evaluate, use, and create images and visual media successfully. Among others, visual literacy enables students to navigate through challenging information landscapes, and it also enables students to think critically and express themselves. The visual literacy standards thus provide the framework for the development of this skill, which would otherwise have been left out of the school curriculum. These skills are developed, something that will see the students come out as capable of handling visual materials in the same manner that academicians process text and critically as a way of advancing their academic careers and their position in a society that is visual in nature.

Furthermore, González-Zamar et al. (2023) believe that an increased significance of visual literacy in universities is associated with the reality that the student population must be critical of visual information in a media-driven world. Students, being a native digital generation, must be trained to read meaning, not just in text but also digital images. Visual resource use in education stimulates creative and critical thinking and the development of expression skills in students, helping them appreciate education as fully as possible in anticipation of their professional future in a culture dominated by visuals. Four, economics is also one of the significant factors in the type of students the educational system produces, as this is what makes them have knowledge of how economic systems work and take money-related decisions as well. Lusardi and Mitchell (2014) argue that those students with higher levels of financial and economic literacy have better perceptions of their financial situation and are more prepared for possible economic scenarios in the future. This is aligned with the management model proposed because economic literacy is one of the factors that will help them to manage their economic aspects in their personal and professional lives, which will give them a better quality of life and make them more competitive in the workplace.

Research Implications

The study can provide three aspects, including managerial, academic, and policy implications. For managerial implications, the model of educational ecological factors offers practical managerial advice to those overseeing private higher education institutions. For instance, interdepartmental teams including academic affairs, student services, and administration should facilitate the development of coordinated programs of student development through administrative leaders in organizational units. Managers of student affairs should focus on these measurable interventions, such as formal mentoring programs, peer support groups, and career guidance services, that aim at the four literacy components. Strategically invest in digital platforms to establish technology integrations and ensure access to all students at varying levels of need. Administrators should establish robust feedback loops by conducting regular surveys and focus groups to assess the effectiveness of the ecological factor, if any. Key performance measures should include student engagement, retention, and graduate employment. Distribution of resources must, in that regard, be based on the interrelatedness of ecological aspects and be free of siloed approaches that de-merit the necessity of all aspects to play a role towards the overall well-being and development of students. The implementation focus must be on creating interwoven systems to provide the ecological student experience across and between all three elements.

To have academic implications, this study expands the field of the theory of educational ecology by validating the model of Bronfenbrenner in the context of private higher education. Future research needs to investigate the long-term correlations between ecological variables and career success in a longitudinal manner, tracking down graduates 5-10 years after. These studies should consider cross-cultural adjustment in the South Eastern Asia environment, where the value of local culture can determine the relationship among factors. The four-literacy model offers research potential in digital literacy development and critical thinking assessment. The roles of resource differences need to be compared across ecological implementation and results in cross-institutional comparisons. Cooperation between research universities and private institutions will enable them to develop longitudinal data to examine the dynamics of the factors. Predictive algorithms are based on the structural relationships in the model, which identify students at risk. This may be followed by research on how (and to what extent) hard and soft skills can be successfully integrated into the ecological models to inform competency-based education literature and practices of implementation.

Government agencies should be involved in the development of ecological factors in terms of policy implications by building funding measures, including the provision of student services infrastructure and updating technology. Regulatory systems will need to consider the scarcity of resources available to private institutions and the level of quality assurance that can be provided by tiered compliance schemes. The policy of industrial cooperation may be improved by facilitating industrial collaboration through offering tax exemptions, joint training programs, and internship requirements in major industries in Bangkok. It is essential to implement policies that aim at establishing digital equity, which include subsidized internet access and lending devices to needy students. Ecological factors should also be part of quality assurance measures used to accredit academic productivity. Sharing resources among private colleges through library and equipment consortium should be encouraged by provincial governments. These programs should be initiated at the government level to ensure that student development quality outcomes are properly intervened. Policy assistance is needed to scale up infrastructure immediately and ensure the long-term sustainability of ecological practices.

Recommendations for Future Research

Future investigation should focus on longitudinal studies of student development outcomes over time to determine cause-and-effect relationships between ecological variables and career success. There is a need for comparative work in diverse Southeast Asian private higher education contexts to further refine the model and test its applicability across cultures. The impact of specific technological interventions, particularly hybrid learning models and digital literacy programs, should be assessed in an ecological context. Research is urgently needed on socioeconomic inequalities and the effects on access to education in private schools. Research is needed to investigate the models and value of industry-academia partnerships in the developing fields of digital economy and healthcare and their contribution to curriculum relevance and student employability. Skewed perceptions and attitudes are areas for further research, such as the measurement of ecological factors and

analysis of student experience qualitative from a mixed-methods approach investigation. Furthermore, studies are needed to evaluate the scalability of the management model across different resource-stratified institutions and organizational frameworks. Validation studies in other developing countries might provide empirical support for the model, besides revealing how it can be adapted to local cultures to make it operable.

Conclusion

In this research, an educational ecological management model for developing student quality in private institutions of private higher education in Bangkok was designed and validated in a complete management simulation. Findings of the study suggest that the three dimensions of students, student affairs, and educational institutes have a statistically significant positive effect on student quality development, supporting the position of the effectiveness of the ecological theory for understanding the holistic development of a student. The validated management model includes four essential literacies: public literacy, media and technology literacy, visual literacy, and economic literacy, serving together to meet the requirements of global careers in the twenty-first century. The model was established to be very relevant and applicable in the real implementation of higher education in the private sector. Ecological systems theory by Bronfenbrenner was another theory augmented by theoretical input to the situation of private higher education in Southeast Asia. To have practical implications, the contribution contributes to a broader literature that offers practical advice to institutional leaders, student affairs practitioners, and policymakers. This research fills the gaps in the literature of educational ecology regarding the school of the private sector in Thailand and offers an empirical base for the systemic endeavor, which bridges human-social-skill development and professional skill development. It arose from the fact that a combined strategy of strategic technology, system-wide governance, and systemic quality development of all faculty and institutional levels would be the solution to this situation, considering both external and internal factors in society. It is possible to apply this model in the future to enhance organizational performance in the generation of graduates with technical competencies and interpersonal skills that are paramount to success in the fast-growing digital economy - and to do so in a manner that can lead to sustainable development of the private higher education sector in Thailand.

References

Albulushi, A. R. (2024). Exploring the Landscape of Creativity and Innovation in Higher Education Institutions: Opportunities, Challenges, and Strategies for Mobilization and Sustainability. *Scholars Journal of Economics, Business and Management, 11*(12), 377-382. https://doi.org/10.36347/sjebm.2024.v11i12.001

Alfirević, N., Arslanagić-Kalajdžić, M., & Lep, Ž. (2023). The Role of Higher Education and Civic Involvement in Converting Young Adults' Social Responsibility to Prosocial Behavior. *Scientific Reports, 13*(1), 2559. https://doi.org/10.1038/s41598-023-29562-4

Caldwell, H. D., Ham, S. A., Mattson, C. D., Woodruff, J. N., & Lee, W. W. (2020). Longitudinal Assessment of Personal and Professional Development Competencies in Medical Students. *Journal of General Internal Medicine, 36*(8), 2506-2508. https://doi.org/10.1007/s11606-020-05969-x

Ceci, S. J. (2006). Urie Bronfenbrenner (1917-2005). *American Psychologist, 61*(2), 173-174. https://doi.org/10.1037/0003-066x.61.2.173

Charungkaittikul, S., & Henschke, J. A. (2014). Strategies for developing a sustainable learning society: An analysis of lifelong learning in Thailand. *International Review of Education, 60*(4), 499-522. https://doi.org/10.1007/s11159-014-9444-y

Choi, Y. H., Bouwma-Gearhart, J., Lenhart, C. A., Villanueva, I., & Nadelson, L. S. (2021). Student Development at the Boundaries: Makerspaces as Affordances for Engineering Students' Development. *Sustainability, 13*(6), 3058. https://doi.org/10.3390/su13063058

Crocco, O. S. (2018). Thai Higher Education: Privatization and Massification. In G. Fry (Ed.), *Education in the Asia-Pacific Region: Issues, Concerns and Prospects* (pp. 223-255). Springer Singapore. https://doi.org/10.1007/978-981-10-7857-6_9

den Hertog, R., & Boshuizen, H. P. A. (2021). Learning Professional Knowledge: Bachelor Nursing Students' Experiences in Learning and Knowledge Quality Outcomes in a Competence-Based Curriculum. *Vocations and Learning, 15*(1), 21-47. https://doi.org/10.1007/s12186-021-09274-4

Farias-Gaytan, S., Aguaded, I., & Ramirez-Montoya, M.-S. (2023). Digital transformation and digital literacy in the context of complexity within higher education institutions: a systematic literature review. *Humanities and Social Sciences Communications, 10*(1), 386. https://doi.org/10.1057/s41599-023-01875-9

Filges, T., Dietrichson, J., Viinholt, B. C. A., & Dalgaard, N. T. (2022). Service learning for improving academic success in students in grade K to 12: A systematic review. *Campbell Systematic Reviews, 18*(1), e1210. https://doi.org/10.1002/cl2.1210

Fuller, B., Liu, Y., Bajaba, S., Marler, L. E., & Pratt, J. (2018). Examining how the personality, self-efficacy, and anticipatory cognitions of potential entrepreneurs shape their entrepreneurial intentions. *Personality and Individual Differences, 125*, 120-125. https://doi.org/10.1016/j.paid.2018.01.005

González-Zamar, M. D., Abad-Segura, E., & Ademar Ferreyra, H. (2023). Visual Arts Education literacy in university contexts. *IJERI: International Journal of Educational Research and Innovation,* (19), 170-186. https://doi.org/10.46661/ijeri.5735

Hattwig, D., Bussert, K., Medaille, A., & Burgess, J. (2013). Visual Literacy Standards in Higher Education: New Opportunities for Libraries and Student Learning. *portal: Libraries and the Academy, 13*(1), 61-89. https://doi.org/10.1353/pla.2013.0008

Henderson, A., & Trede, F. (2017). Strengthening attainment of student learning outcomes during work-integrated learning: A collaborative governance framework across academia, industry and students. *Asia-Pacific Journal of Cooperative Education, 18*(1), 73-86. https://files.eric.ed.gov/fulltext/EJ1141290.pdf

Jackson, D. (2014). Skill mastery and the formation of graduate identity in Bachelor graduates: evidence from Australia. *Studies in Higher Education, 41*(7), 1313-1332. https://doi.org/10.1080/03075079.2014.981515

Jackson, D., Fleming, J., & Rowe, A. (2019). Enabling the Transfer of Skills and Knowledge across Classroom and Work Contexts. *Vocations and Learning, 12*(3), 459-478. https://doi.org/10.1007/s12186-019-09224-1

Kennedy, A., & Stevenson, H. (2023). Beyond reproduction: the transformative potential of professional learning. *Professional Development in Education, 49*(4), 581-585. https://doi.org/10.1080/19415257.2023.2226971

Leal Filho, W., Salvia, A. L., & Eustachio, J. H. P. P. (2023). An overview of the engagement of higher education institutions in the implementation of the UN Sustainable Development Goals. *Journal of Cleaner Production, 386*, 135694. https://doi.org/10.1016/j.jclepro.2022.135694

Lusardi, A., & Mitchell, O. S. (2014). The Economic Importance of Financial Literacy: Theory and Evidence. *Journal of Economic Literature, 52*(1), 5-44. https://doi.org/10.1257/jel.52.1.5

MacFarlane, K. (2018). Higher education learner identity for successful student transitions. *Higher Education Research & Development, 37*(6), 1201-1215. https://doi.org/10.1080/07294360.2018.1477742

McLaughlin, J. E., Chen, E., Lake, D., Guo, W., Skywark, E. R., Chernik, A., et al. (2022). Design thinking teaching and learning in higher education: Experiences across four universities. *PloS One, 17*(3), e0265902. https://doi.org/10.1371/journal.pone.0265902

Mitchell, J. E., Nyamapfene, A., Roach, K., & Tilley, E. (2019). Faculty wide curriculum reform: the integrated engineering programme. *European Journal of Engineering Education, 46*(1), 48-66. https://doi.org/10.1080/03043797.2019.1593324

Pornphol, P., & Chittayasothorn, S. (2017). A Case-Based Quality Assurance System for Higher Education. *International Journal of Culture and History (EJournal), 3*(1), 23-29. https://doi.org/10.18178/ijch.2017.3.1.073

Smith, R. G. (1966). The Structure of Communication. *Journal of School Health, 36*(5), 218-222. https://doi.org/10.1111/j.1746-1561.1966.tb05564.x

Sohail, M. T., & Chen, S. (2022). A PLS-SEM Analysis to Check Public Willingness to Use Water from Filtration Plants Installed by Public Own Organizations; a Study of Psychological Behavior Toward Sustainable Development. *Psychology Research and Behavior Management, 15*, 2671-2682. https://doi.org/10.2147/prbm.s386097

Spychalski, B. (2023). Holistic Education for Sustainable Development: A Study of Shaping the Pro-Quality Attitude of Students in the Polish Educational System. *Sustainability, 15*(10), 8073. https://doi.org/10.3390/su15108073

Thana, P. M., Tini, A., & Ratu Bulkis, R. (2022). Developing Students' 21st-Century Skills Through A Multidisciplinary Approach. *Journal of Digital Learning and Distance Education, 1*(7), 277-283. https://doi.org/10.56778/jdlde.v1i7.64

Vicente, P. N., Lucas, M., Carlos, V., & Bem-Haja, P. (2020). Higher education in a material world: Constraints to digital innovation in Portuguese universities and polytechnic institutes. *Education and Information Technologies, 25*(6), 5815-5833. https://doi.org/10.1007/s10639-020-10258-5

Yao, C. W., & George Mwangi, C. A. (2017). Role of Student Affairs in International Student Transition and Success. *Journal of International Students, 7*(4), I-III. https://doi.org/10.32674/jis.v7i4.180

Yoder, L. S. M., & Bicksler, A. (2012). Using Institutional Arrangements to Teach Undergraduates About Commons in Thailand, and Beyond. *International Journal of the Commons, 6*(2), 363. https://doi.org/10.18352/ijc.340

Zovko, M.-É., & Dillon, J. (2017). Humanism Vs. Competency: Traditional and Contemporary Models of Education. *Educational Philosophy and Theory, 50*(6-7), 554-564. https://doi.org/10.1080/00131857.2017.1375757