Humanities, Arts and Social Sciences Studies

Research Article

Humanities, Arts and Social Sciences Studies
https://so02.tci-thaijo.org/index.php/hasss
ISSN (Online): 2630-0079

DEVELOPMENT OF A THAI UNIVERSITY MODEL ORIENTED TO WORKING ADULTS AND THE RETIRED ELDERLY

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ABSTRACT

Global demand for adult tertiary education is rising and many universities are adapting to answer this demand, including those in Thailand. Therefore, this study aims at developing a model for reorienting Thai universities towards working adults and retirees. This university reorientation model is derived from a synthesis of critical elements for university adult education and analysis of the current adult education practices of Thai universities alongside the good practices of universities abroad. Data were collected through documentary research, expert interviews, stakeholder interviews and expert validation. Results showed that firstly, elements important to university adult education orientation include external organizational context; institutional principles, philosophy and core values; education provision; student affairs; research and innovation development; academic services and cultural preservation; and administration. Secondly, it became apparent that Thai universities share some good practices with their counterparts abroad, including university philosophies that promote equality and diversity, lifelong learning infrastructures, partnership development, and a variety of flexible programs. Nevertheless, many Thai universities lack some of the good practices found elsewhere such as mature student service units, services tailored to adult client needs, financial aid for working adults and retirees, adult student associations, and university retirement communities. Thus, the reorientation model developed in this study consists of six elements: philosophy and mission; policy, partnerships, and organizational and administrative structure; education provision; student affairs; research and innovation development; and environment and technology.

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Received: *28 December 2022*
Revised: *10 May 2023*
Accepted: *11 May 2023*
Published: *11 August 2023*

Citation:
Prachyapruit, A. (2023). Development of a Thai university model oriented to working adults and the retired elderly. Humanities, Arts and Social Sciences Studies, 23(2), 364–377.

Keywords: Higher education; university; working adult; retiree; age-diverse university; adult learner

1. INTRODUCTION

Higher education systems across the globe are confronting various challenges. As the digital economy grows, many traditional jobs are transforming or disappearing, and people are increasingly recognizing the need to upskill and reskill to meet the demands of the rapidly changing labor market. Concurrently, economic pressures and increased longevity are leading many older adults to work after the traditional retirement age, with the traditional linear three-stage life being replaced by a multi-stage life, a flexible structure in which individuals can work and study continuously (Dede & Richards, 2020).

At present, Thailand is considered a complete-aged society and is projected to become a super-aged society by 2033 (Foundation of Thai Gerontology Research and Development Institute [TGRI], 2021). While the overall population ages, the college-aged population is projected to decline from 4.82 million in 2014 to 3.62 million in 2032 (Office of the Higher Education Commission [OHEC], 2018). This situation will result in an oversupply of higher education seats, which will increase pressure for Thai universities to compete for enrollment. Thus, universities have to reach out to non-traditional learners. They also need to adapt how they operate in response to the diverse needs of working adults and retirees.

Thai education policy promotes lifelong learning, expansion of education opportunities and innovation development for the well-being of the elderly. For example, the Higher Education, Science, Research, and Innovation Policy and Strategy (2020–2027) includes lifelong learning, future skillset programs and an Aging Society Program (Office of National Higher Education Science Research and Innovation Policy Council [NXPO], n.d.). At present, there are various forms of education provision for older adults in Thailand, including the elderly school program and the activities of clubs for the elderly. These programs and activities have various providers including healthcare, elderly and religious organizations, higher education institutions, and the Office of Non-Formal and Informal Education. Meanwhile, there are various problems in education and service provision for retirees including limited access, lack of awareness about older learners, and limited budgets and space for relevant activities (Office of the National Education Commission [ONEC], 2018). In addition, working adults and retirees confront various barriers in pursuing higher education such as lack of time, resources, funding, motivation, low self-esteem, health problems, rigid admission criteria, and rigid service delivery (ONEC, 2018). Furthermore, higher education tends to be youth-centric (Chen, 2017). Further research is needed to make university practices more suitable for working adults and retirees. While the number of studies on age-friendly and age-diverse universities and related concepts increases (Montepare, 2019), there is still limited coverage of this topic in the Thai context. Therefore, this research develops a model for adapting Thai universities to better serve working adults and retirees. Specifically, the research objectives of this study are to synthesize elements of universities oriented to working adults and retirees, to analyze the current adult education practices of Thai universities, to analyze the good adult education practices of universities abroad, and from these, to develop a model for reorienting Thai universities towards working adults and retirees.

2. LITERATURE REVIEW

The literature that informed the conceptualization of this research includes:

2.1. Adult, older, and nontraditional students

There are various ways to define adulthood including a biological definition associated with reproductive functions, a legal definition associated with human rights, a social definition associated with social roles, and a psychological definition associated with the ability to make decisions (Daiva, 2017). Likewise, an older adult can be determined by age, biology (associated with changes in physical and mental attributes, and the ability to function), social function (associated with social roles and status), economic status (associated with retirement and pensions) and by other subjective assessments associated with perceptions, values and community norms (Thanaviriyakul, 2002). A nontraditional student, adult learner, or older adult learner is defined as anyone who meets any of the following criteria:

1) is studying part-time and working full-time while enrolled
2) is financially independent from their parents
3) has one or more dependents other than a spouse
4) is a single parent
5) delayed enrollment in postsecondary education
6) lacks a standard high school diploma (Choy, 2002).

Adult learners share some common learning characteristics: they are likely to view themselves as self-directed learners; they utilize their accumulated experience as a learning resource, with reflection on these experiences at the core of their learning; their readiness to learn relates to their developmental tasks or necessity to cope with life situations; they tend to be problem-centered in their learning orientation; their motivation to learn is intrinsic; and they possess crystalized intelligence associated with knowledge and skills accumulated through experiences in a given culture (Knowles, 1980; Merriam & Baumgartner, 2020).

Many scholars have identified adult and older adult learners' needs, enablers, and barriers to participation in higher education. Needs and enablers of adult and older adult participation in higher education include *system-level factors* such as system differentiation and coordination, lifelong learning policies, national qualification frameworks, credit transfer systems and regulation of flexible learning; *institutional governance* including institutional missions and policies that emphasize social equity, skills and professional development; *access* including flexible alternative admission routes, prior learning recognition and wider access programs; *flexible programs and delivery* such as part-time and evening programs, accelerated learning programs, distance/e-learning programs and support centers with ICT facilities; *student services and support* including counseling, career guidance and academic and financial support; *curriculum and instruction* including flexible, learner-centered instruction, a curriculum that links theory and practice, self-assessment, continuing education opportunities and teacher training; and *cooperation with external stakeholders* (Dollhausen et al., 2013; Schuetze & Slowey, 2002; MacDonald, 2018).

Barriers to adult participation in higher education comprise personal/dispositional and attitudinal barriers including lack of self-confidence, lack of incentive and motivation, lack of awareness of learning benefits, prior negative learning experiences, negative perceptions of instructors and administrators, and feelings of isolation; situational barriers including multiple conflicting responsibilities, lack of time, financial support and transportation; academic barriers or personal academic limitations such as literacy, numeracy, computer skills, inquiry skills, attention, memory and critical thinking; institutional barriers, institutional policies and procedures that impede adult participation and course completion, such as lack of information about learning opportunities, rigid admission requirements and procedures, rigid class schedules and program delivery, lack of support and administrative services at suitable times, and lack of staff awareness of adult learners' needs (Fairchild, 2003; MacKeracher et al., 2006; Dollhausen et al., 2013; Saar et al., 2014).

Likewise, barriers to older adult participation in higher education include demographic barriers such as age accompanying family and work obligations, personal and family illness, and time constraints; attitudinal barriers including ageism, negative self-perception and negative prior educational experiences; and structural barriers including lack of transportation, support services and financing (Lakin et al., 2007).

2.2. Policies and practices that promote adult education

Different countries have policies and practices that promote adult and older adult learning. In Thailand, these measures can be categorized into four strands: *national policies and plans* which promote lifelong learning and capacity development such as the 10th, 11th and 12th National Economic and Social Development Plan and the National Strategy 2018–2037; *older adult policies and plans* which include education and lifelong learning measures to promote preparation for quality aging such as the Elderly Act 2003 and the Second National Plan for Older Persons; *education policies and plans* which promote lifelong education for all Thai citizens such as the National Education Act 1999, the Non-formal and Informal Education Promotion Act 2008, the Draft Lifelong Learning Act 2013, and the National Scheme of Education 2017–2036; and *higher education policies and plans* which clearly address higher education challenges in an aging society such as the Second 15-Year Long Range Plan on Higher Education (2008–2022), the 20-Year Higher Education Long Range Plan, the Higher Education, Science, Research and Innovation Policy and Strategy (2020–2027), and the Higher Education Plan for Manpower Development (2021–2022). These higher education policies call for the Thai higher education system to broaden access for all age groups, particularly working adults and retirees, to embrace lifelong learning, and to enhance economic capacity, adjusting the education system to meet the need for reskilling, upskilling, universal design campuses, mechanisms to facilitate transitions between higher education and other education levels and sectors, and research and innovation around the demands of an aging society.

In particular, recent higher education policies have implemented several measures to overcome barriers to lifelong learning, such as the Higher Education Sandbox project, upskilling and reskilling training, massive open online courses, National Credit Bank System, micro-credential training and nano degree programs, grants for lifelong learning training, a database for skill development and management, and the Thai Ageing Research Innovation Platform. Meanwhile, the Second National Plan for Older Persons has made progress towards positive attitudes about aging, health promotion, and social protection for the elderly (Jitapunkul & Wivatvanit, 2008). Despite the effectiveness of these policies, some limitations and implementation remain. For example, lifelong learning measures still use a welfare approach instead of an education empowerment approach (Dhirathiti, 2014). In addition, there is unclear mutual understanding among the general public and policy implementers about the scope of the lifelong learning concept as well as their own roles and responsibilities (Charungkaittikul, 2017). Last but not least, there are inconsistencies in

lifelong learning policy output and outcomes between regions, often depending on the discretion of key policy implementers within each locality (Dhirathiti & Pichitpatja, 2018).

Other countries also have lifelong learning policies and initiatives for adults and retirees. In Singapore, the SkillsFuture Initiative (SSG), a national movement to advance the economy, intends to provide all Singaporeans with lifelong learning and skill development opportunities. SSG consists of various initiatives for different stakeholders including students, adult learners, employers and training providers. Some noteworthy programs for adult and elderly Singaporeans are SkillsFuture Credits, a scheme that grants Singaporeans aged 25 years and above S$500 for skills-based courses, and the SkillsFuture Mid-Career Enhanced Subsidy which provides Singaporeans aged forty and above up to 90% of course fees for SSG-supported courses and at least 90% of Ministry-of-Education-subsidized full-time and part-time course fees. The SSG initiative has successfully increased workforce participation in training and the number of government-funded training schemes (Yorozo, 2017). This could be because it helps remove financial barriers and empowers Singaporeans of all ages to develop their skills with flexible learning options. Nevertheless, SSG's lifelong learning goals have not been reached, partly because of the country's preference for academic over vocational education, the absence of a local culture that emphasizes the habits of mind needed for lifelong learning, and a dominant pragmatic ideology, which is at odds with the SSG movement's goal that Singaporeans look beyond employability and the utilitarian value of education to the pursuit of joy and passion for learning (Tan, 2017).

In Hong Kong in 1997, which marks the retrocession to China and the establishment of the Hong Kong Elderly Commission, lifelong learning became the cornerstone of education reform and healthy aging as reflected in many government policies, reports and initiatives such as the Opportunities for the Elderly Project (OEP), the Report on Healthy Ageing, the Report on the Healthy Ageing Campaign, the Report on Adding Life to Retirement Years and the Elder Academy (EA) Scheme. In particular, the EA Scheme uses a network approach to promote older adult learning, which is distinctive for being district and school based while promoting intergenerational learning, fostering cross-sectional collaboration among stakeholders, and allowing autonomy for each academy (Tam, 2012, 2013). Meanwhile, limitations in this scheme remain, such as financial instability, inadequate communication and cooperation between academies, duplication of courses between academies, and courses irrelevant to real student needs (Tam, 2013).

In Scotland, a lifelong learning policy, Skills for Scotland: A Lifelong Learning Strategy, was launched in 2007. It aims to develop a cohesive lifelong learning system, and in 2010 renewed its focus on the skills required to accelerate economic recovery as well as setting out a new flexible partnership approach to meet Scotland's skills demands (The Scottish Government, 2010). Scottish government measures to promote lifelong learning include the 2001 development of the Scottish Credit and Qualifications Framework (SCQF), which aims to create a more flexible lifelong learning system and offers credits for prior learning and credit transfers between different education sectors; the 2005 establishment of a joint funding council for further and higher education in order to create an integrated and coherent system of tertiary education; and the 2008 establishment of Skills Development Scotland (SDS), which is responsible for various skill development activities including modern apprenticeships, information, guidance, literacy and numeracy campaigns, and financial support for part-timers through individual learning accounts (ILAs). These policies and measures aim for lifelong learning, but some challenges in implementation remain, including irregular and unstable funding for community-based learning and learning through involuntary organizations, and inequalities in education achievement (Gallacher, 2021).

In Ireland, there have been several key legislative frameworks and policies to promote adult and lifelong education. These include the Universities Act 1997, the National Qualification Act 1999, Qualification and Quality Assurance Act 2012, the White Paper on Adult Learning (Learning for Life) 2000, Access and Equity in Higher Education 2000, the Report of the Taskforce on Lifelong Learning 2002, the National Skills Strategy 2007 (Brosnan, 2013), the National Skills Strategy 2025 (Department of Further and Higher Education, Research, Innovation and Science [DFHERIS], 2021) and the National Further Education and Training (FET) Strategy 2020–24 (European Commission, n.d.). Some of the recommendations to promote lifelong learning in general, and adult access to higher education in particular, can be summarized as follows: expansion of alternative entry routes for applicants without a secondary school certificate; the establishment of quotas or targets for mature students; changes in funding models and mechanisms; the expansion of provision and flexibility; increased information and guidance; partnerships and integration across education levels (Brosnan, 2013); employer involvement in skills development and utilization; instructional improvement at all levels; lifelong learning; active inclusion; an increase of skilled laborers (DFHERIS, 2021); provision of pathways for diverse groups of learners; support for societal participation and strong communities; preparing people for

lifelong learning and development; and adult education becoming a major driver for social and economic development (European Commission, n.d.).

In the United States, responsibility for adult and continuing education is delegated to state and local government. American HE institutions have relatively high autonomy, but this also depends on the type of institution and sources of its funding. Despite limited federal control over education, there have been some federal laws that expand higher education opportunities for adults including the Morrill Land Grant Act 1862, the Servicemen's Readjustment Act 1944, the Higher Education Act 1965, and the Carl D. Perkins Vocational and Technical Education Act 1984. Since the turn of the 21st century, amendments to some of these legislative frameworks have tended to subjugate adult and continuing education to the needs of the labor market and accountability movement (Milana & McBain, 2015). Meanwhile, the US has several innovative practices to promote lifelong learning such as onsite training, accelerated programs, modularized courses, open-entry/open-exit courses, open source curricula, bridge programs, career pathway programs, statewide articulation and transfer policies, prior learning assessment, credit transfer support services, and lifelong learning accounts (Tate et al., 2011).

2.3 Concepts related to reorienting universities towards working adults and retirees

Many organizations and researchers have proposed good practices and principles for adult and older adult oriented higher education: for example, the Age-Friendly University (AFU) (Montepare, 2019) and the Adult Learning Focused principles (Flint & Associates, 1999). The 10 AFU principles were launched in 2012 and endorsed by the Age-Friendly University Global Network, which consists of over 60 member countries: see Montepare (2019) for a complete list. They reflect the six pillars of institutional activities: teaching and learning, research and innovation, lifelong learning, intergenerational learning, encore careers, and enterprise and civic engagement. The AFU principles advocate universities involve older adults in all their core activities, and respond to their diverse needs such as access to education, online learning, health programs and cultural activities. They also promote younger students' understanding of longevity dividends and intergenerational learning. Last but not least, they encourage universities to support aging research and develop partnerships with the local elderly community. Many of the AFU principles align with research on older adult learners' needs, including learning for personal development, career development, social interactions and community involvement (Lakin et al., 2007). The AFU principles can be used as a guiding framework to develop and evaluate age-friendly policies, programs and practices (Montepare, 2019). There are also a growing number of studies on the Age-Friendly University, most of which are case studies that provide lessons from applying AFU principles and strategies to reorient universities towards age-inclusivity. Only Silverstein et al. (2021) have developed instruments to evaluate age-friendly campuses. Notably, all of these studies were conducted in North America and Europe, despite the fact that the Aging Society is a global phenomenon.

While the AFU principles tend to focus on older adult students, the Adult Learning Focused Institution (ALFI) principles target working adults. In 1999, the ALFI principles were developed from a benchmark study of six adult-focused colleges and universities, conducted in partnership with the American Productivity & Quality Center (APQC). Initially, the Council for Adult and Experiential Learning (CAEL) proposed 8 principles of effective practice for serving adult learners (Flint & Associates, 1999) and developed the Adult Learning Focused Institution (ALFI) Assessment Toolkit based on them (CAEL, 2005). The ALFI principles were later expanded to 10, covering the following elements: adaptivity, outreach, teaching and learning process, assessment of learning outcomes, strategic partnerships, technology, financing, student support system, transitions, and life and career planning (see https://www.cael.org/higher-education-ten-principles). Based on these 10 principles, CAEL developed Adult Learner 360, an integrated diagnostic tool and consulting solution for higher education institutions to assess and continuously improve their services for adult learners. According to CAEL's study (2005), institutions with high scores from the ALFI Assessment Toolkit have strong adult student retention and success rates. This could be because these universities proactively respond to adult learners' unique needs and remove various obstacles for them.

From reviewing this literature, a conceptual framework was developed, illustrated in Figure 1.

3. CONCEPTUAL FRAMEWORK

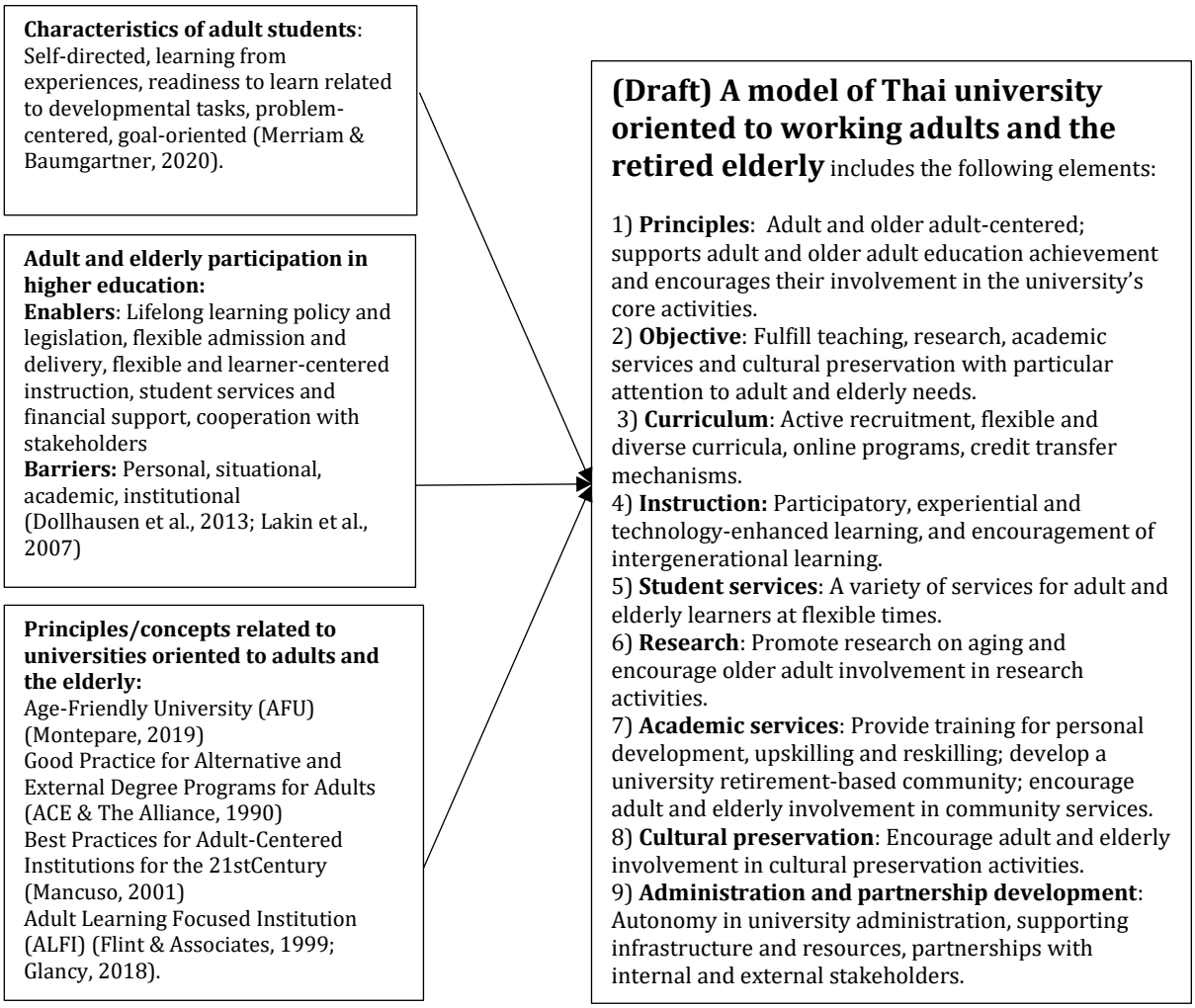


Figure 1: Conceptual Framework

The conceptual framework (Figure 1) shows theories and concepts that this research used as a guide to develop a model for reorienting Thai universities towards working adults and the retired elderly including distinctive characteristics of adult students (Merriam & Baumgartner, 2020); enablers and barriers to adult and elderly participation in higher education (Dollhausen et al., 2013; Lakin et al., 2007); principles/concepts related to universities oriented to adults and the elderly, such as the Age-Friendly University (AFU) (Montepare, 2019) and the Adult Learning Focused Institution (ALFI) (Flint & Associates, 1999; Glancy, 2018).

4. RESEARCH METHODOLOGY

This study is descriptive research. Data were collected through documentary study, interviews, and expert group judgment between 6 October 2020 and 12 July 2021 with approval from the Research Ethics Review Committee for Research Involving Human Subjects at Chulalongkorn University (COA No. 186/2563). The research procedure is divided according to the research objectives into 4 phases:

4.1 Phase 1

Synthesize a list of concepts and research relevant to adult HE based on documentary analysis of 20 relevant academic resources and use that list to guide interviews with 5 experts on higher education, adult education, aging, the aging society and lifelong learning. Then, compile elements important to universities oriented to working adults and retirees.

4.2 Phase 2

Analyze current practices of Thai universities oriented to working adults and retirees through documentary study and interviews with 4 universities: Chulalongkorn University (CU), Thammasat University (TU), Sukhothai Thammathirat Open University (STOU) and Rajamangala University of Technology Thanyaburi (RMUTT). The selection criteria were based on the university policies and practices that are age-friendly. Data were collected from university websites and key informants from each university: 10 university administrators, 8 administrators of offices serving adults, and 9 adult students or service recipients. Data were collected via semi-structured interview protocols and were inductively analyzed using the constant comparative method (Lincoln & Guba, 1985). Then, documentary analysis and interview data were synthesized.

4.3 Phase 3

Analyze good practices of universities abroad oriented to working adults and retirees including Michigan State University (MSU) and SUNY Empire State College (ESC) in the USA, Dublin City University (DCU) in the Republic of Ireland, University of Strathclyde (UoS) in Scotland, Singapore University of Social Sciences (SUSS) and Hong Kong Metropolitan University (HKMU). The selection criteria were based on universities' membership of adult HE networks and/or policies and practices that are age-friendly. Data were collected from each university's website, related research and interviews with 5 faculty members and 2 adult educators whose work relates to working adults and retirees. Semi-structured interview protocols were used to collect data from key informants. Data were then analyzed and synthesized using the same method as phase 2.

4.4 Phase 4

Develop a Thai university model oriented to working adults and retirees by integrating data from phases 1–3. Verify the draft model with 5 experts. Revise the draft and propose the final model of Thai university oriented to working adults and retirees.

5. RESULTS

The findings of this study are divided into 4 parts:

5.1 Elements of universities oriented to working adults and retirees

First stage documentary analysis and interviews revealed 7 elements of universities oriented to working adults and retirees: external organizational context; institutional principles, philosophy, and core values; education provision; student affairs; research and innovation development; academic services and cultural preservation; and administration.

5.2 Current practices of Thai universities oriented to working adults and retirees

Based on the synthesis of information from interviews with 10 university administrators, 8 administrators of offices serving adults, and 9 adult and elderly students/service recipients from 4 Thai universities, current practices of Thai universities oriented to working adults and retirees were revealed as follows:

5.2.1 University philosophy, policy, and missions

Thai universities have an organizational philosophy that promotes equal educational opportunity, diversity, and lifelong learning. They have measures for dealing with social disruption. Meanwhile, they use technologies to expand educational opportunities and provide flexible modes of instruction and service delivery.

5.2.2 Administrative structure and management

Most Thai universities have decentralized their education and service delivery for adults across different faculties and offices. Meanwhile, most universities have or are developing a lifelong learning office or platform. They are also developing partnerships with internal and external stakeholders to provide education and services for working adults and retirees.

5.2.3 Education provision

In terms of recruitment and admission, some Thai universities proactively recruit adult students by developing partnerships with the business sector. For example, Thammasat University (TU) recruits adult students through its partnership with SkillLane, an online learning platform company. Rajamangala University of Technology Thanyaburi (RMUTT) recruits adults through its networks in the industrial sectors. Meanwhile, a Thai open university (Sukhothai Thammathirat Open University: STOU) attracts many working and retired adults through its open access policy and distance learning. In addition, most universities have or are in the process of developing a credit-bank system.

In terms of curriculum and instruction, Thai universities offer diverse and flexible curricula including short courses with no credit and credit options, competency-based certification programs, modular

programs, MOOCs and online learning programs, upskilling and reskilling programs, evening and weekend programs, and in-house training programs. Many universities promote active, online and self-directed learning.

5.2.4 Student affairs

Thai universities do not have any adult student affairs offices, adult student services, adult student associations, clubs or activities, or financial support specifically for adult students. Nevertheless, most universities offer evening and weekend programs and provide services during flexible hours. Many Thai universities also have digital platforms which allow part-timers access to student services. Meanwhile, the Thai Open University (STOU) has a course package delivery service and local support centers, advisors, clubs and activities.

Unfortunately, most adult students do not participate in student activities due to time constraints and work responsibilities. However, older learners in TU's elderly school participate in recreation activities that are part of their course.

5.2.5 Research

Some Thai universities have infrastructure to support research related to the Aging Society, aging, and human resource development: Chulalongkorn University established its platform for Aging Research and Innovation (Chula ARi), Thammasat Business School created the Aging Business & Care Development Centre (ABCD), and Thammasat University's Institute for Continuing Education and Human Resources (ICEHR) formed a research division. Some Thai universities also provide research forums to promote public discourse on how HE can respond to the needs and interests of adults, e.g., the Thammasat Gen Next Education Expo. Many universities have also received grants for aging and lifelong learning research.

5.2.6 Academic services and cultural preservation

Faculties and offices of Thai universities provide various academic services to adults including short courses, consulting and community problem-solving. For example, Chulalongkorn University offers short training courses from various faculties, as well as Chula Unisearch and Chula ARi's research platform. At Thammasat University (TU), the Institute for Continuing Education and Resources offers in-house training, consultancy services, and the elderly school program. In addition, the Aging Business & Care Development Center of Thammasat Business School provides training, public seminars and consultancy services. Furthermore, TU offers a civic education course on which students volunteer to work in the retired community. At STOU, the Office of Continuing Education provides various social services including general training, in-house training, and non-credit short online courses. STOU's local study centers also offer short courses for vocational training and recreation. At RMUTT, the Faculty of Architecture designs nursing homes. Most universities collaborate with public and private sectors to provide services for the elderly.

In terms of cultural preservation, most universities arrange activities for the general public, some of these activities, such as traditional Thai music performances and religious gatherings, garner interest from the elderly. Nevertheless, most adult and elderly students in degree programs do not get involved in academic service activities because they have multiple responsibilities. The exception to this is TU's elderly school, where students volunteer for projects as a part of their training.

5.2.7 Environment, learning resources, media and technology

The physical environment of many Thai campuses is inclusive or universally designed to be accessible to people of all ages and abilities**.** They also provide adult access to various learning resources. For example, RMUTT allows students with Lifelong Learner IDs to access university libraries and learning resources. Most universities also provide online learning environments and resources such as the Thammasat Gen Next Academy and Chula MOOC.

5.2.8 Objectives and satisfaction of adult and elderly students

Adult and elderly students identify objectives for pursuing graduate studies as follows: developing knowledge, skills and attitude; building social networks; obtaining higher degrees; ensuring job security and career advancement. Adult education recipients participated in training programs related to their community service work, while older adults participated in the elderly school program for retirement preparation. When selecting a university, these students considered university reputation and culture, and were attracted by distance learning with local study centers. In general, most adult and elderly students were satisfied with university education and services.

5.3 Good practices of universities abroad

Based on documentary analysis and interviews with faculty members and adult educators in universities abroad, good practices were identified as follows:

1. University philosophy, vision, and missions clearly state the intent to provide high-quality, flexible, and adult-centered education. These universities aim to provide practical education, expand education opportunities, and promote age diversity and lifelong learning.

2. Central offices and platforms are established to coordinate adult education programs, activities and services. The university strategic plans specify activities to promote adult well-being. Partnerships inside and outside the universities fulfill academic duties relevant to adults. Personnel management measures aim at hiring retired academic and support staff. In addition, there is flexible work design appropriate for older staff.

3. Diverse and flexible programs cater to the needs of adult and older adult learners. There are flexible mature student admission schemes with prior learning assessment and credit transfer mechanisms between formal, non-formal, and informal learning. Instructional approaches are consistent with andragogical principles, experiential, self-directed and online learning. Intergenerational learning is also encouraged.

4. Mature student offices, divisions and dedicated personnel are directly responsible for adult student services and activities from admission to graduation. Some services address family needs, such as daycare and family housing. Scholarships are targeted at adult students. Finally, mature student associations, intergenerational activities and volunteering encourage older student involvement.

5. Interdisciplinary research clusters and aging centers encourage older adult involvement in aging research.

6. Academic services offices provide continuing education and short courses and are involved in university retirement communities and elderly volunteer programs.

7. Campuses have inclusive climates and physical environments while online service is user-friendly.

5.4 University model development

The university model developed from this study titled Thai University Oriented to Working Adults and the Retired Elderly (TUOWR) is composed of six key elements comprising philosophy and mission; policy, partnerships and organizational and administrative structure; education provision; student affairs; research and innovation; and environment and technology. See Figure 2.

6. DISCUSSION

Several Thai education policies and legislative measures created barriers for adults and older adults to pursue lifelong learning. For example, rigid undergraduate application requirements, lack of curricular standards for lifelong learning and time limits on undergraduate and graduate study. Nevertheless, the government has tried to eliminate many policy and legislative barriers while initiating policies and projects to promote flexible education and lifelong learning such as the Higher Education Sandbox project and the National Credit Bank. These initiatives are consistent with Dollhausen et al.'s (2013) suggestion that national policies are key factors when it comes to widening higher education access for adults.

Thai universities and those abroad that are oriented to working adults and retirees share some good practices. In terms of *philosophy and mission*, they emphasize equal education opportunities, diversity, lifelong learning and practical education. For example, Michigan State University (MSU) encourages practical education congruent with the philosophy of its land grant roots. Similarly, the Thai open university (STOU) upholds a lifelong learning philosophy and aspires to expand education opportunities to all. These good practices are consistent with those identified by CAEL/APQC (Flint & Associates, 1999) and Mancuso (2001), which state that higher education institutions should articulate a mission that reflects commitment to adult learners and permeates and guides institutional practices. In terms of *organizational and administrative structure*, most Thai universities have decentralized their adult education services to various faculties and offices. Similar to their counterparts abroad, they have or are developing lifelong learning offices and platforms to coordinate degree and non-degree programs for lifelong learners. For example, STOU plans to change its Office of Continuing Education to an Office of Lifelong Education, TU has its Gen Next Academy, and RMUTT has the Lifelong Learning Division under its registration office. Likewise, universities abroad have central offices to coordinate adult academic programs, activities and services such as Michigan State University's AgeAlive Initiative, Dublin City University's Age-Friendly University Initiative, University of Strathclyde's Age-Friendly Academy, Singapore University of Social Sciences's Institute for Adult Learning and College of Lifelong Learning and Experiential Learning, and Hong Kong Metropolitan University's Elder Academy. These efforts at restructuring are consistent with suggestions from Montepare et al. (2020), who recommend strategies for building and sustaining age-friendly campuses include infrastructure for supporting and sustaining age-friendly initiatives. Notably, the central offices in Thai universities focus mainly on coordinating degree and non-degree programs, while these offices of universities abroad coordinate a wide range of adult-related programs, activities and services.

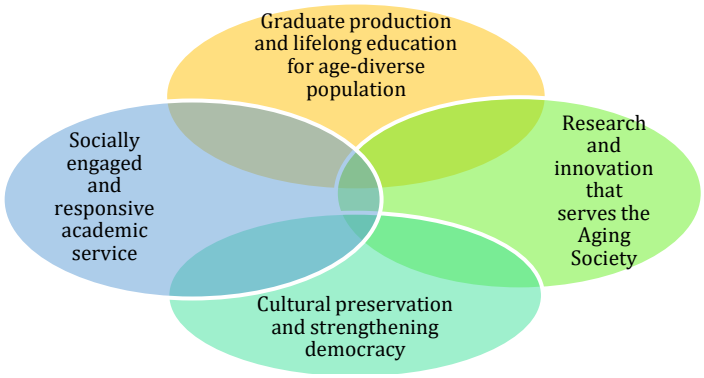
Rationale

Demographic change due to the Aging Society leads to an aging population while the number of college-age students declines, threatening the survival of the Thai higher education system. Disruptive technology affects demand for labor and necessitates workforces continuously upskill and reskill. The traditional linear three-stage life is replaced by a multistage life cycle. Therefore, universities have to expand educational opportunities for older members of the population and become lifelong learning institutions.

Philosophy

1. Provide high quality education with emphasis on practicality.
2. Expand lifelong education opportunities with the principles of equality, equity and diversity.
3. Fulfill academic duties that respond to the needs of the Aging Society.

Missions



Education provision	Student affairs	Research and innovation development
1. Flexible programs including degree programs with no credit/for credit options and credit transfer mechanisms; evening and weekend courses; executive programs; individually designed programs; and short courses for work-related skill and personal development. 2. Lifelong learning platforms with credit transfer mechanisms. 3. Courses for raising awareness of the Aging Society and active aging. 4. Degree programs, certificate programs and short courses for personnel in the elderly service sector. 5. Continuing education for alumni. 6. Various flexible and student-centered instructional approaches consistent with andragogical principles.	1. Adult student affairs division with supporting personnel. This division provides accessible one-stop services at flexible hours. 2. Comprehensive adult student services ranging from pre- to post-entry support. Services tailored to adult student needs, with various types of financial aid. 3. Support for adult student associations and clubs. Activities addressing adult student interests and promoting the campus community's sense of caring and awareness for active aging. 4.Encouragement for intergenerational activities and alumni involvement in student activities.	1. Research affairs division to support research and innovation on aging and the Aging Society and multidisciplinary research platforms for the Aging Society. 2. Policies and institutional measures to support research for the Aging Society through research grants, facilities, databases, research dissemination, researcher and research network development. 3. Research projects related to aging and the Aging Society conducted in collaboration with stakeholders. 4. Institutional research conducted to collect data on the university's age-friendly activities.

Environment and technology

1. Universally designed campuses.
2. University communities that recognize the values and benefits to campus climate of adult involvement in classroom and student activities. Fostering an age-friendly climate in classrooms and on campus.
3. Accessible and user-friendly online learning environments.
4. Technology to support effective communication, education provision and student services.

Policy, partnerships, and organizational and administrative structure

Policy

1. Reward administrators and university communities with a positive mindset towards adult students.
2. Expand lifelong education opportunities and reform the education system to accommodate age-diverse students.
3. Respect diversity and support affirmative action.
4. Encourage adult student involvement in the university's core activities.

Partnerships

Lifelong Learning Center for Working Adults and the Retired Elderly (LLCWR) facilitates collaboration between faculties and offices within the university to develop lifelong learning and interdisciplinary research platforms for the Aging Society. It also develops partnerships with other universities, professional associations, NGOs and organizations in the public and private sectors to provide education programs, develop credit transfer mechanisms, fundraise and conduct research that addresses the needs of adults. At the international level, it collaborates with relevant professional associations to conduct research projects and advocate for age-friendly university policies.

Organizational and administrative structure

1. LLCWR to coordinate adult education programs, services, and activities.
2. Administrators with a shared vision at all levels supporting university policy changes. A participative management approach with emphasis on community relations and the efficient utilization of current assets. Hiring of professionals and retired staff to work on flexible, short-term contracts.

Figure 2: Thai University Model Oriented to Working Adults and the Retired Elderly (TUOWR Model)

In terms of *education provision*, universities in Thailand and abroad offer various flexible degree and non-degree programs responding to the diverse needs of adults. As asserted in Dollhausen et al. (2013) study, flexible programs and modes of delivery can widen adult learner participation. Such practice is also aligned with the principles of Age-Friendly University (AFU): "to recognize the range of educational needs of older adults" and "to promote personal and career development in the second half of life and to support those who wish to pursue second careers" (Montepare, 2019). Similar to most universities abroad, many Thai universities also have or are developing credit transfer mechanisms or credit bank systems, consistent with Dollhausen et al.'s (2013) assertion that recognition of prior formal, non-formal, and informal learning is a valuable tool to provide wider and more flexible access to higher education for adults.

In terms of *research*, universities oriented to adults in Thailand and abroad have research platforms on the Aging Society and aging itself. Some also have offices to support research on aging and/or human resource development. Such support is consistent with the 6th principle of AFU: "to ensure that the universities' research agenda is informed by the needs of an aging society and to promote public discourse on how higher education can better respond to the varied interests and needs of older adults" (Montepare, 2019).

Some major differences between universities in Thailand and abroad are as follows: In terms of *undergraduate admissions*, most Thai undergraduate programs require applicants to graduate from Mathyom Suksa 6 or equivalent. In contrast, some universities abroad have undergraduate admission channels or schemes for mature applicants that consider work, personal and relevant experiences as well as prior education. Such flexible admission practices are consistent with Mancuso's (2001) best practices of adult learner-centered institutions for the 21st century, which state that the institution should use inclusive and non-competitive admission processes designed for adult learners. This also concurs with Dollhausen et al. (2013), who advise that alternative routes into higher education drive adult participation.

In terms of *student affairs*, some universities abroad have designated offices, divisions and staff for adult students, such as DCU's Mature Student Office. This practice is consistent with Rice's (2003) assertion that universities should have adult student service offices to serve as clearinghouses for resources and referrals. These universities abroad also provide services that cater to adults' needs such as childcare and family apartments, consistent with the 7th principle of the Adult Learning Focused Institution (ALFI) which recommends universities support adult learners in using comprehensive academic and student support systems (Glancy, 2018). In addition, universities abroad offer financial aid targeting adult students consistent with the 3rd principle of ALFI: "promotes choice using an array of payment options for adult learners in order to expand equity and financial flexibility" (Glancy, 2018). Finally, universities abroad organize intergenerational activities to encourage interactions between youths and the elderly. For example, MSU's Grandparent University Program and Senior Ambassador Program, are consistent with the 4th AFU principle: "to promote intergenerational learning to facilitate the reciprocal sharing of expertise between learners of all ages" (Montepare, 2019). In Thai universities, however, intergenerational interactions only tend to happen by chance.

The Thai University Model Oriented to Working Adults and the Retired Elderly (TUOWR) developed in this study has some distinctive recommendations. Firstly, a Lifelong Learning Center for Working Adults and the Retired Elderly (LLCWR) should be established to coordinate adult academic programs, activities and services, following Montepare et al.'s (2020) and Luz and Baldwin's (2019) suggestions that universities should build infrastructure to sustain age-friendly efforts. TUOWR also recommends partnerships with internal and external organizations at local, national and international levels to provide services and mobilize policies that promote adult and elderly well-being, which is consistent with the 6th principle of ALFI: "engages in strategic relationships, partnerships, and collaborations with employers and other organizations in order to develop and improve educational opportunities for adult learners" (Glancy, 2018). Secondly, lifelong learning platforms should be established, allowing adult and elderly students to learn online or on campus. Adult and elderly students should also be offered study options with or without credit that could later transfer to degree programs. Students should also be able to design individualized programs in consultation with mentors. Flexible, diverse and adult-centered program delivery is consistent with the good practices described by ACE & Alliance (1990), Mancuso (2001), and Dollhausen et al. (2013). It is also consistent with the 3rd AFU principle which recommends universities recognize the elderly's diverse educational needs (Montepare, 2019). TUOWR promotes diverse and flexible instructional approaches congruent with andragogical principles, and consistent with the 8th principle of ALFI (Glancy, 2018). Thirdly, an adult student affairs division should be in place to coordinate activities and programs, and provide comprehensive services for adult and elderly students. It also provides services and activities tailored to adult and elderly needs. The 7th ALFI principle is consistent with this: "assists adult learners using comprehensive academic and student support systems in order to enhance students' capacities to become self-directed, lifelong learners" (Glancy, 2018). Furthermore, scholarships should be targeted at adult and elderly students, following the 3rd ALFI principle which recommends

expanding payment options for adult learners (Glancy, 2018). Fourthly, interdisciplinary research platforms on the Aging Society and offices that support research on human resource development and aging are recommended, consistent with the 6th principle of AFU which recommends universities set a research agenda that addresses the needs of an aging society and encourage public discourse on the university roles in responding to various elderly interests and needs (Montepare, 2019). Fifthly, the campus physical environment and climate should be age-friendly, complemented by an accessible, user-friendly and supportive digital learning environment, reflecting Silverstein et al.'s (2021) description of an age-friendly physical environment and the 9th ALFI principle: "uses technology to provide relevant and timely information and to enhance the learning experience" (Glancy, 2018).

7. CONCLUSION AND RECOMMENDATIONS

In response to the challenges of the Aging Society and synergistic digital disruption, this study develops a model for higher education reform titled Thai University Oriented to Working Adults and the Retired Elderly (TUOWR). The model integrates findings on elements of universities oriented to working adults and retirees, current practices of Thai universities and good practices of universities abroad. This study identifies good practices that Thai universities and those abroad share, including institutional philosophy and missions that emphasize equality, diversity, lifelong learning and practicality; infrastructure to coordinate adult education and aging research; and flexible education provision. Meanwhile, Thai universities lack some good practices found elsewhere, including mature student services units, services and activities tailored to adult learners, and financial aid for adult students. TUOWR makes the following distinctive recommendations for university reorientation to adult and elderly learners: infrastructure to support adult education programs, student affairs and research; flexible education provision; student services and activities tailored to adult learner needs; scholarships for adult learners; and age-friendly physical environment and climate. These features are consistent with the principles of the Age-Friendly University, the Adult Learning-Focused Institution and much related research (e.g. Montepare, 2019; Flint & Associates, 1999). To put this university reorientation model into practice, the following recommendations are offered.

7.1 Recommendations for policy and practice

Based on the research findings, the following recommendations are made:

1. The government should eliminate laws, rules and regulations that hinder lifelong learning and create avenues to promote it such as financial support schemes for lifelong learners, databases of adult programs and mechanisms to evaluate and improve these programs. Support should be provided for cooperation between organizational sectors, education and training for adults, and innovation for improving elderly quality of life.
2. University administrators should adopt TUOWR and make their policies and practices friendlier to adult clients. In doing so, they should adapt the model to match their university missions, cultures and contexts. Administrators at all levels should have a positive mindset towards adult learners and encourage such attitudes to permeate throughout the university community. Administrators who are responsible for mobilizing this change should build partnerships both inside and outside the university and maximize the utilization of existing structures and resources to promote the well-being of adults on and off campus.
3. Faculty members should offer courses and activities that promote intergenerational learning, awareness of longevity dividends and the impact of the Aging Society. They should also encourage adult learners to participate in research and academic service projects, especially those related to adults, the elderly and aging itself. Last but not least, they should acquire the knowledge, skills and experiences essential for teaching adults.

7.2 Recommendations for future research

Based on the research findings, the following recommendations are made:

1. Develop indicators and measures for assessing university orientation to working adults and retirees.
2. Conduct follow-up evaluations after adopting TUOWR.
3. Research the effects of the Aging Society on traditional-aged students.
4. Research to develop a work-based learning curricular prototype for working adult competency development.
5. Conduct R&D projects to develop training and lifelong education models for retirees based on contemporary concepts such as the Triple Five Model (Juito, 2015) and the 60-Year Curriculum (60YC) (Dede & Richards, 2020).

ACKNOWLEDGEMENT

This research is funded by Chulalongkorn University: CU_GR_62_32_27_03, The Ratchadapisek Sompoch Endowment Fund (2019).

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