

Recommendation for Improvement Landscape Architecture curriculum, Faculty of Architecture, Urban Design and Creative Arts, Mahasarakham University

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Abstract

This study aims to improve the Bachelor of Landscape Architecture (BLA) version 2017 of Mahasarakham University corresponds to the changing global situations with the following objectives: review the global situation related to the landscape profession; examine the performance of this BLA graduates; analyze the factors involved in improving this program; and propose a recommendation for improvement. Data were collected through the examination of the world's environmental situation, together with principles and concepts of the landscape profession. The graduate performance was evaluated by their employers by using a questionnaire which data was statistically analyzed.

The study revealed that environmental disasters and widespread epidemics are threatening our world, and landscape architecture is one discipline that can help to alleviate those impacts and promote quality of life. BLA curriculums in Thailand are under Architect Council of Thailand regulation, so they offer similar course structure and content. The BLA graduates from MSU have met employers' expectations, but they have recommended some improvement.

This study proposes two recommendations: **Curriculum structure** is to adjust courses to correspond with the contexts of this changing world by updating and integrating them into landscape concept, design, and practice, and incorporating with other disciplines; setting up subject groups responding to the global landscape, such as climate change, sustainable design in urban and cultural landscape; and adjusting the course content according to the involving in information technology, agricultural landscape, and landscape healing. Curriculum management should cover increasing site visits and problem-based learning, focusing on improving students' skills in working with others and local communities through faculty projects, academic services, research, or other university activities. The graduates should have life skills, analytical skills, respect for organization or agency rules, and honesty.

Keywords: Landscape Architecture, Landscape Architecture Course, Landscape Architect, 21st Century Learning

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1. Introduction

The landscape architecture practice is relatively new and not well-known in Thailand. There are currently 9 institutions that provide the Bachelor of Landscape Architecture (BLA) curriculum: Chulalongkorn University, Mae Jo University, Kasetsart University, Thammasat University, King Mongkut's Institute of Technology Ladkrabang, Rajamangala University of Technology Suvarnabhumi, King Mongkut's University of Technology Thonburi, and Mahasarakham University (MSU). MSU has offered this program in 2011, the only program in the northeastern region of the country. Six classes have graduated over the past 10 years. The curriculum has been continuously improved in accordance with landscape architecture's development direction and in response to the National Education institutions' development strategy which prioritizes in producing graduates to meet the market's demands, keeping up with the evolving global situation, and creating graduates who meet standards in 5 different qualifications; 1) morality and ethics, 2) skills and knowledge, 3) intellectual skills 4) interpersonal skills and accountability, and 5) numerical analysis, communication skills, and technology use (The Higher Education Commission, 2009). So, the 2023 curriculum will be developed by considering all relevant factors, including professional standards, feedback from graduate employers, and the global environmental concern. For instance, severe natural disasters resulting from global warming, rapid change in the digital age, particularly wild spread epidemics like COVID-19, Monkey Pox, or Norovirus. Among

other things, the economic environmental, social, and cultural changes have influenced the underpinnings of landscape architecture field.

2. Research Objectives

This study has 5 objectives which are:

- 1) to review the changing global situation related to landscape architecture profession;
- 2) to examine the professional practice performance of graduates from the Bachelor of Landscape Architecture (BLA) curriculum version 2017 at MSU;
- 3) to analyze factors involved in improving this BLA program;
- 4) to review and assess the BLA curriculum version 2017 at MSU;
- 5) to propose recommendations for this curriculum improvement.

Moreover, the new curriculum needs to be in line with the development of landscape architecture graduates in the 21st century, promote life-long learning in the aspects of knowledge, skills, and the appropriated mindset to produce graduate that support local community and improve residents' quality of life (Office of The Higher Education Commission, 2009).

3. Research Methods

Under the direction of the Architect Council of Thailand (ACT), the BLA curriculum structure has been regulated to reassure quality of the graduates. The curriculum must adhere to the landscape architecture teaching and learning principles, and more importantly, it needs to have an identity that satisfies the job market. Additionally, it must reflect current events and update with other changes in the world. Therefore, there are 5 major steps in this study; 1) study of the ACT's professional requirement for applying the professional license, 2) study of graduate's employer needs, 3) study the changing world circumstance effecting landscape architecture profession, 4) analyze the MSU landscape architecture curriculum, and 5) summarize from the findings to suggest ways to improve the BLA curriculum of Faculty of Architecture, Urban Design and Creative Arts, at MSU.

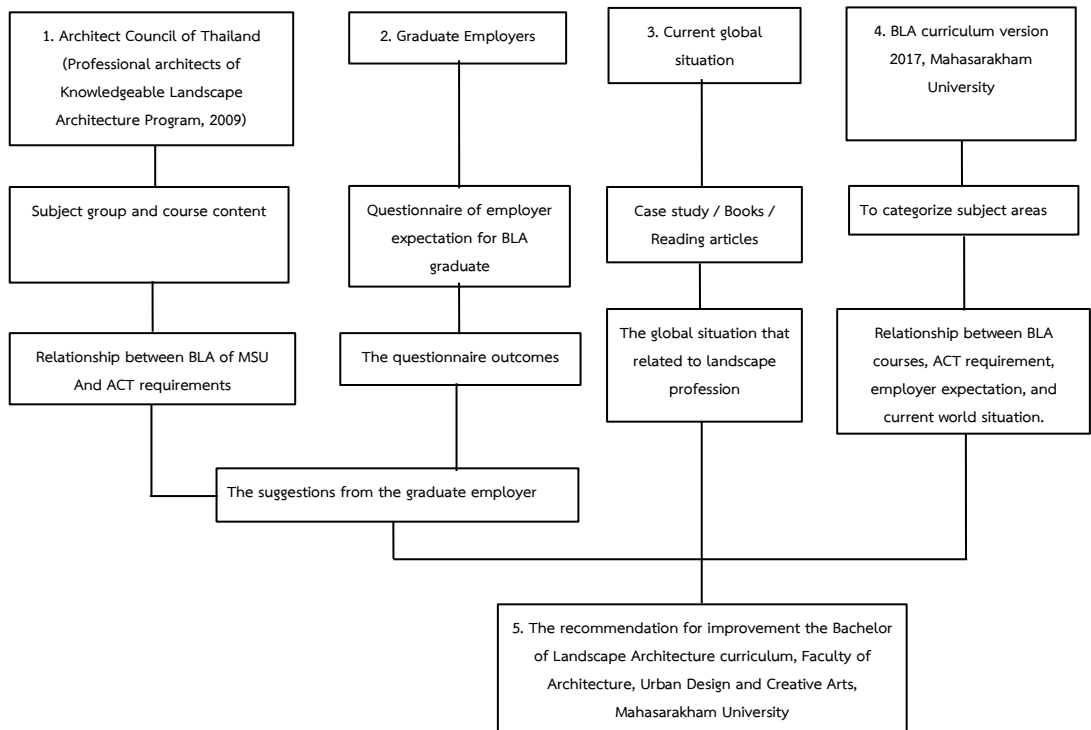


Diagram 1: The study framework

4. The Current Landscape Architect Use Situation

4.1 ACT and Landscape Architecture Curriculum in Thailand

The Architect Council of Thailand has determined courses and content for applying professional license in Landscape Architecture profession that landscape architects should be knowledgeable in 15 areas; 1) site planning, 2) ecology and environment, 3) law and regulation related to landscape architectural design, 4) landscape architectural design principles and theories, 5) plants and planting design, 6) grading, earth work, and drainage, 7) construction structures and materials, 8) utility system, 9) plant materials, 10) landscape for specific project, 11) general knowledge of the landscape profession, 12) professional practice skill, 13) process of construction management, 14) construction drawing and specification, and 15) communication skill (Architect Council of Thailand, 2009). There are nine institutions are offering BLA degree in Thailand Architect which the Faculty of Architecture at Chulalongkorn University is the first institute that offer classes starting in 1978 (Boonkham, 2020) Since then, the BLA curriculums have been available at other institutes. At the undergraduate level, nine universities provide landscape architecture courses; 1) Faculty of Architecture, Chulalongkorn University; 2) Faculty of

Architecture and Environmental Design, Maejo University; 3) Faculty of Architecture, Kasetsart University; 4) Faculty of Architecture, Urban Design and Creative Arts, Mahasarakham University; 5) Faculty of Architecture, King Mongkut's Institute of Technology Ladkrabang; 6) Faculty of Engineering and Architecture, Rajamangala University of Technology Suvarnabhumi; 7) Faculty of Architecture, Chiang Mai University; 8) Faculty of Architecture and Design, King Mongkut's University of Technology Thonburi; these eight universities have a 5-year program; and 9) Faculty of Architecture and Planning, Thammasat University offers the 4-year program.

4.2 The Importance of Landscape Architecture Program

In addition to architecture and urban planning, "landscape architecture" is a profession that deals with physical design and planning by solving problems for the safety, happiness, and welfare of people based on the principle of protecting the land and environment, this discipline applies elements of art, science, nature, engineering, and sociology together (Boonkham, 2020) Landscape architect is the profession that involves morphology, geology, ecology, and botany by applying these sciences to the overall environment along with the living pattern, social, philosophical, and economic factors. The landscape architect is concerned with constructing and developing creatively for the local community, and design outdoor spaces for functions and aesthetic. This professional gives priority to natural resource conservation, so its practice is to ensure that human activities are harmonious with the natural system, which is considered as landscape architecture's responsibilities and roles. Therefore, the landscape architecture program is essential to the world's current and future situations manifesting as severe natural disasters and epidemics which have negative effects on mankind (Architect Council of Thailand, 2020)

4.3 The Concepts of Landscape Architecture

According to dynamic trends in urban development, landscape practice has been adjusted to respond to this circumstance. So, the landscape architecture curriculum must be in line with these changes, and the improvement should reflect in the goals and directions of the landscape program and content of the course works. The current changes in the world involved in landscape architecture that has been studied in this research can be divided into 9 main aspects as follows:

4.3.1. Climate Change affects the entire world, so all nations must cooperate to find solutions. The landscape initiative in the United States has focused on several issues. For example, the changes in land management practices, new legislation that regulates architecture design and construction, heat-reducing design, and environmentally flexible design, including acknowledging how climate change affects the visual or physical aspects of a landscape or infrastructure planning.

Ecosystems and human well-being both contribute significantly to the ability to adapt to change. Even if changes take place, it is still possible for people to live healthy lives while also limiting and reducing the effects of climate change on a large scale in the future (Ruffo, 2022)

4.3.2 Sustainable Design Principle is all about understanding the complex interrelationship between natural processes and human life. The sustainability of nature is enhanced by contextual and eco-friendly design ultimately leading to societal health and well-being in a methodical and sustainable way which then can drive and increase economic value (Sepe, 2021)

4.3.3 Reducing Carbon Emissions is the approach that supports activities that reduce CO₂ and increase carbon sequestration such as controlling vehicle emissions, increasing green areas, protecting natural forest, designing green area with less grass mowing, management of irrigation systems and using biological pest control, planting more trees in public spaces, and utilizing vegetation and managing the soil to release less CO₂ and increase CO₂ absorption (Landscape Institute, 2021)

4.3.4 Green Infrastructure is conducted by using green and blue infrastructures rather than engineering infrastructure. The practice covers planning for roadside trees and urban forests to reduce temperature and pollution while increasing biodiversity. It also includes designing public spaces to minimize urban heat, choosing green roofs to decrease building temperature, and reducing the impact of urban heat islands (Landscape Institute, 2021). For the reduction of water supply shortage, infrastructure planning, the issue of efficiency in water consumption, and water recycling are important. To fulfill this task, the extending water management and water storage areas where the water supply is limited are necessary. Meanwhile, the enhancing role of landscape architects in flood management such as increasing surface infiltration, controlling, and slowing down surface runoff, and preserving on site water are important topics. At the same time, managing methods result in additional advantages like improved local environment, increased biodiversity, and created healthy ecosystems.

4.3.5 Green Recovery is the way to invest in clean technologies, projects, and industries that have positive impacts on the environment and sustainable economic growth by using renewable energy in the rural area including any projects and industries that boost economic development in a sustainable and environmentally friendly direction. Using appropriate renewable energy sources can lessen the effects of climate change. Additionally, management planning in marine and coastal landscape areas that balances economic recovery with environmental concerns is also crucial (Landscape Institute, 2021)

4.3.6 Multifunctional Agriculture Landscape for Food Production is an alternative strategy for preserving the agricultural sector and cultural heritage, creating agricultural landscape's long-term sustainability. Climate change impacts productivity and other resources in agricultural areas. So, land resource management should be an integrated management system that evaluate the requirements for rural communities, urban area, natural areas that are needed for preservation for ecological purpose, agricultural areas, and other production areas to reduce food transportation cost (Landscape Institute, 2021)

4.3.7 Inequality public spaces and multifunctional areas should be universal designed areas so that anyone can use for social interaction, safety, and health benefits (Sepe,M. 2021). Encouraging universal accessibility for all groups should be extended to public transportation, and other public and semipublic buildings as well.

4.3.8 Medical relates to landscape architecture due to Emerging Infectious Diseases (EID) which constantly occur in this world. While many researchers have proved that vitamin D3 (Vitamin D), which is produced in the human skin from UVB rays early in the morning and late afternoon can improve human immune system. The increasing human immune system helps reducing diseases like depression without drug dependence, specific cancers, diabetes, arteriosclerosis, or osteoporosis caused by calcium deficiency (Penckofer S, 2010). To encourage people to use outdoor space, activities must be formed. Besides physical health, the landscape has proven to have a healing effect on human psychology. For a healing landscape, it should be flexible and available for both physical and mental benefits through a variety of senses, including temperature, touch, time, taste, smell, and sight (Clare Cooper, 2013). It should be safe and eco-friendly which promotes social interaction, as well as health and a high quality of life (Sepe,M. 2021).

People want more high-quality outdoor space because of the current global environmental change and epidemic problem and the profession of landscape architecture is one discipline that play a crucial part in supporting these circumstances. The profession of landscape architecture is emphasized in site design and planning, it has been recognized and needed worldwide particularly in America, Europe, and even in Asia. For instance, Singapore has prioritized urban environment design for city improvement. The result from that is to increase public park, green area, and other natural attractions, including interrogative green area with high-rise buildings and the airport. Adding more green areas is the government's intention to improve the quality of the city and the lives of its residents. Along with lowering energy consumption, pollution, and

environmental issues, governmental expenses can be reduced which will reflect in boosting the nation's economy in the future.

4.4 Employers' Opinions of the Graduated from BLA program, Faculty of Architecture, Urban Design and Creative Arts, MSU were collected through a questionnaire survey. This questionnaire asked employers about their expectations from the BLA graduated qualifications, and the demand for BLA graduates in the future job market. The respondents ranged from private and public sectors such as landscape design offices, consulting firms, landscape construction firms, and maintenance companies, and from the government sectors like a municipal government office, Municipal Public Works and Town & Country Office, and Community Organizations Development Institute (CODI). There are 29 respondents, and the data were analyzed by the analytic induction using statistical analysis such as Percentage, Mean, and Standard Deviation (S.D.) values. The questionnaire's weighting criteria was graded in accordance with their level and compared to their mean criteria as follows.

4.51 – 5.00 refers to “most strongly agree”

3.51 – 4.50 refers to “strongly agree”

2.51 – 3.50 refers to “agree”

1.51 – 2.50 refers to “slightly agree”

1.00 – 1.50 refers to “disagree”

It is a significant external factor that helps to identify the qualities and requirements of landscape architects which are necessary for curriculum improvement to meet market demands. According to the study, there are six main areas where graduates are expected to perform which shows in the below table.

Table 1: The Conclusion of Expectation from BLA Graduate's Employer, Faculty of Architecture, Urban Design and Creative Arts, MSU.

The Expectation	\bar{X}	S.D.	Result
1. Knowledge skills.			
1.1 Using knowledge to work independently and solve problems.	4.41	1.23	Strongly Agree
1.2 Researching and comprehending the problems.	4.34	1.28	Strongly Agree
1.3 Discovering and comprehending the fact.	4.17	0.93	Strongly Agree
1.4 Assessing conceptual data and evidence from various sources while applying knowledge of academic and professional content.	4.14	0.91	Strongly Agree

The Expectation	\bar{X}	S.D.	Result
1.5 Researching intricate issues and offering original solutions.	4.07	0.90	Strongly Agree
2. Understanding of the underlying concepts and theories in relevant fields.			
2.1 Information and comprehension of architectural theory.	3.93	0.86	Strongly Agree
2.2 Expertise and comprehension of urban planning and design concepts.	3.72	0.66	Strongly Agree
2.3 Be familiar with and comprehend the theory of urban planning and architecture.	3.62	0.62	Strongly Agree
2.4 Construction and project management knowledge and understanding.	3.55	0.63	Strongly Agree
2.5 Understanding of the principles of interior architecture.	3.03	0.52	Agree
3. Wide range Knowledge and skill in landscape architecture.			
3.1 Design knowledge and abilities in landscape architecture.	4.24	0.99	Strongly Agree
3.2 Project study knowledge and abilities.	4.14	0.97	Strongly Agree
3.3 Landscape architecture design know-how.	4.10	0.96	Strongly Agree
3.4 Design knowledge and abilities in landscape architecture.	3.90	0.95	Strongly Agree
3.5 Construction-related knowledge and abilities.	3.76	0.79	Strongly Agree
4. Proficiency with general and graphic computer program.			
4.1 2D/3D Presentation program	4.48	1.25	Strongly Agree
4.2 Microsoft Office program	3.72	0.66	Strongly Agree
4.3 Motion Graphic and VDO Presentation programs	3.66	0.62	Strongly Agree
5. Knowledge and communication skills.			
5.1 Capacity to communicate clearly in writing and speaking.	4.24	1.05	Strongly Agree
5.2 Capacity to create presentations that are appropriate for various audiences.	4.24	1.01	Strongly Agree
6. General graduates' qualifications and manner.			

The Expectation	\bar{X}	S.D.	Result
6.1 Knowledge of traditions and laws.	4.90	1.12	Most Strongly Agree
6.2 Be truthful.	4.52	1.33	Most Strongly Agree
6.3 Be accountable, thorough, patient, and punctual.	4.48	1.31	Strongly Agree
6.4 Maintain discipline and adherence to the organization's and society's rules and become accountable for ongoing education and development.	4.45	1.25	Strongly Agree
6.5 Being able to cooperate with others and being a good leader and follower.	4.41	1.25	Strongly Agree

In addition to the above listed, there are other recommendations gleaned from the questionnaire, which are the professional practice and the ability for interdisciplinary cooperation, these are significant topics that are crucial to the curriculum improvement. The fieldtrip to visit various landscape works and offices can add more prospective to the students' future careers. Graduates should have the ability to collaborate with other professionals and has interdisciplinary knowledge. For achieving empirical learning, the courses in construction, structure, and planting in the BLA curriculum should be strengthened in content, skills, and case study so that the graduates will be more updated. Additionally, graduates should be keen on technology and proficient in using the necessary computer programs for design and construction drawings, like Auto Cad, Revit, Rhino, and InDesign.

Information from the Architect Council of Thailand, graduate employer's need, correspondence with the current world situation, and information on BLA program at MSU are summarized in the following table (Table 2).

Table 2: The Relationship of Landscape Architecture Program (revised edition, 2017), Architect Council of Thailand Requirements, Graduate Employer's Expectation, and the Current World Situation.

Architect Council of Thailand (ACT) (Course and content for applying landscape architecture professional license)	Landscape Architecture Curriculum, Mahasarakham University (Revised edition, 2017)			Employer's needs	Related to the world situation
	Yes	No	Subject groups related to ACT Professional Architect Requirement for BLA program		
1. Site planning	/		The example subjects; Site planning, Fundamental Landscape, Landscape Architecture Design, Geographic Information System, Construction Technology for Landscape Architecture, Landscape Ecology, Concepts and Theories for Landscape Architectural Design, Public Space Design and Planning, Cultural Landscape, Principles of Urban and Regional Planning, Public Space and Recreation Design area for Esan Cultural, Land Development, Urban Landscape Design, Surveying in Landscape Architecture, Land Developments, Environmental Management, Research for Landscape Architecture, Thesis in Landscape Architecture.	/	/
2. Ecology and environment	/		The example subjects; Public Space Design and Planning, Landscape Ecology, Landscape Architecture Design, Cultural Landscape, Public Space and Recreation Design area for Esan Cultural, Natural Systems and Landscape Architecture, Land Developments, Environmental Management, Research for Landscape Architecture, Thesis in Landscape Architecture.	/	/
3. Law and regulation related to landscape architecture design	/		The example subjects; Laws and Morality, Environmental Management, Professional Practice, Landscape Architecture Design, Public Space Design and Planning, Public Space and Recreation Design area for Esan Cultural, Urban Landscape Design, Surveying in Landscape Architecture, Land Developments, Environmental Management, Research for Landscape Architecture, Thesis in Landscape Architecture.	/	/

Architect Council of Thailand (ACT) (Course and content for applying landscape architecture professional license)	Landscape Architecture Curriculum, Mahasarakham University (Revised edition, 2017)			Employer's needs	Related to the world situation
	Yes	No	Subject groups related to ACT Professional Architect Requirement for BLA program		
4.Landscape architecture design principles and theories			The example subjects; History and Theory of Landscape Architecture, Cultural Landscape, Public Space Design and Planning, Landscape Ecology, Concepts and History and Theory of Landscape Architecture, Public Space and Recreation Design area for Esan Cultural, Cultural Landscape, Principles of Urban and Regional Planning, Urban Landscape Design, Surveying in Landscape Architecture, Land Developments, Environmental Management, Research for Landscape Architecture, Thesis in Landscape Architecture.	/	/
5. Plants and planting design	/		The example subjects; Plants Materials and Design, Plants Materials, Construction Technology for Landscape Architecture, Landscape Architecture Design, Public Space Design and Planning, Cultural Landscape, Public Space and Recreation Design area for Esan Cultural, Urban Landscape Design, Surveying in Landscape Architecture, Environmental Management, Thesis in Landscape Architecture.	/	/
6. Grading, earth work, and drainage	/		The example subjects; Construction Technology for Landscape Architecture, Landscape Architecture Design, Public Space Design and Planning, Urban Landscape Design, Environmental Management, Research for Landscape Architecture, Thesis in Landscape Architecture.	/	/
7. Constructor structures and materials	/		The example subject; Construction Technology for Landscape Architecture, Landscape Architecture Design, Architecture Design, Public Space Design and Planning, Urban Landscape Design, Surveying in Landscape Architecture, Research for Landscape Architecture, Thesis in Landscape Architecture.	/	/
8. Utility system	/		The example subject; Urban Landscape Design, Construction Technology for Landscape Architecture, Landscape Architecture Design, Public Space Design and Planning, Public Space and Recreation Design area for Esan Cultural, Surveying in Landscape	/	/

Architect Council of Thailand (ACT) (Course and content for applying landscape architecture professional license)	Landscape Architecture Curriculum, Mahasarakham University (Revised edition, 2017)			Employer's needs	Related to the world situation
	Yes	No	Subject groups related to ACT Professional Architect Requirement for BLA program		
			Architecture, Land Developments, Research for Landscape Architecture, Thesis in Landscape Architecture.		
9. Plant materials	/		The example subjects; Plants Materials, Plants Materials and Design, Landscape Architecture Design Construction Technology for Landscape Architecture, and Public Areas and Isan Cultural Recreation Areas Design, Public Space Design and Planning, Cultural Landscape, Public Space and Recreation Design area for Esan Cultural, Urban Landscape Design, Surveying in Landscape Architecture, Research for Landscape Architecture, Thesis in Landscape Architecture.	/	/
10. Landscape for specific project	/		The example subjects; Construction Technology for Landscape Architecture, Professional Practice, Environmental Management, Landscape Architecture Design, Architecture Design, Public Space Design and Planning, Cultural Landscape, Public Space and Recreation Design area for Esan Cultural, Urban Landscape Design, Surveying in Landscape Architecture, Land Developments, Environmental Management, Thesis in Landscape Architecture.	/	/
11. General knowledge of landscape profession	/		The example subjects; Landscape Project Management, and Professional Practice, Landscape Architecture Design, Architecture Design, Public Space Design and Planning, Computer for Design and Drawing, Geographic Information Systems, Public Space and Recreation Design area for Esan Cultural, Urban Landscape Design, Surveying in Landscape Architecture, Land Developments, Environmental Management, Research for Landscape Architecture, Thesis in Landscape Architecture.	/	/
12. Professional practice skill	/		The example subject; Landscape Project Management, and Professional Practice, Landscape Architecture Design, Architecture Design, Public Space and Recreation Design area	/	/

Architect Council of Thailand (ACT) (Course and content for applying landscape architecture professional license)	Landscape Architecture Curriculum, Mahasarakham University (Revised edition, 2017)			Employer's needs	Related to the world situation
	Yes	No	Subject groups related to ACT Professional Architect Requirement for BLA program		
			for Esan Cultural, Surveying in Landscape Architecture, Land Developments, Research for Landscape Architecture, Thesis in Landscape Architecture.		
13. Process of construction management	/		The example subjects; Construction Technology for Landscape Architecture, and Landscape Project Management, Architecture Design, Computer for Design and Drawing, Geographic Information Systems, Surveying in Landscape Architecture.	/	/
14. Construction drawing and specification	/		The example subjects; Construction Technology for Landscape Architecture, Materials and Construction, Computer for Design and Drawing, Architectural Drawing, Professional Practice, Landscape Architecture Profession, Landscape Architecture Design, Surveying in Landscape Architecture, Land Developments.	/	
15. Communication skill	/		The example subjects; Communicative English, English for Specific Purposes, Thai for Academic Communication, Thai for Aesthetic Communication, Landscape Architecture Presentation Technics, Fundamentals Design, Principle of Architectural Design, Landscape Architecture Design, Architecture Design, Professional Practice, Concept and Theory Application for Landscape Architectural Design and Planning, Urban Landscape Design, Research for Landscape Architecture, Thesis in Landscape Architecture.	/	

6. Summary

6.1 The Importance of Landscape Architecture

The high-quality outdoor spaces are required for all social groups in responding to world environmental issues and health concerns. This circumstance made landscape architect regarded as one of the important professions that resolves environmental problems and provide quality

outdoor spaces for all. The outdoor spaces should be designed, planned, and laid out to meet universal needs. They should be imaginative, promote more outdoor use, and have both functionality and aesthetic. The approach of landscape architecture practice is constantly evolving along with trends in urban development. Therefore, landscape architectural design should respond to global change, climate change, principles of sustainable design, energy consumption, and environmental impact. At the local scale, landscape design should be sensitive to local identity and respect family and community values.

6.2 Establishing programs in Thailand

The Landscape architecture program was firstly established at Harvard University, USA and currently, this program has been established in 250 universities worldwide. In Thailand, the landscape architecture program was established in 1978. Currently, there are 9 universities where this program has been offered, but the number of academic years and credits are slightly different. The ACT is an organization that regulates all architecture curriculum in every university and issues architecture professional license in Thailand. For BLA program, ACT has provided the requirement that a licensed landscape architect should be knowledgeable in 15 areas as mentioned earlier in 4.1 and table 2.

6.3 Expectations from employer regarding to knowledge and skills of a landscape architect

Table 1 has summarized 6 characteristics desired from the BLA graduate, Faculty of Architecture, Urban Design and Creative Arts, Mahasarakham University which show that honesty and knowledge of custom and regulation are the top requirements in that order, followed by the ability to use all necessary computer graphic programs because these are crucial for the design, then professional knowledge and skills was ranked in third. Next, expectations for using data to solve problems and working independently were found and followed by expectations for knowledge and effectively communicating both orally and in writing. Last, the knowledge and comprehension of the guiding principle and theory in the pertinent disciplines are also expected, as they are crucial to the integration of design and collaboration with the other related fields.

6.4 Recommendation for Improvement of the BLA Faculty of Architecture, Urban Design and Creative Arts, Mahasarakham University

The result of this study can be drawn and concluded in 2 major recommendations as follow.

6.4.1 Curriculum Structure is to adjust courses and subject groups to correspond with the contexts of this changing world by 1) updating with the global current situations and integrating them into landscape concept, design, and practice, and incorporating with other necessary

disciplines; 2) setting up subject groups that incorporating with new material and consistent with the shifting global landscape, such as those pertaining to climate change and the principles of sustainable design both the urban and cultural landscape; 3) adjusting the course content to respond with the involving in information technology, agricultural landscape, and landscape healing.

6.4.2 Curriculum Management is to improve some administrative activity by 1) increasing the number of site visits and study tours to provide a professional experience to the students; 2) promoting and enhancing student's skills to collaborate with others, the academic services for communities through faculty projects and research, together with regularly volunteer works is recommended; 3) developing life skill quality, rules observation, honesty, analytical skills, and problem solving; 4) providing flexibility budget to accommodate with the unexpected situation. In the past 2 years, site visits and surveys were an inconvenience, there should be remedies with other formats of study tours. Therefore, budget allocation and funding should be flexible for modifications and to be consistent with the changing situation, not interfere with the field trip of landscape architecture students.

7. Recommendations

This study focuses on improving the Bachelor of Landscape Architecture curriculum of Mahasarakham University. It has indicated necessary issues regarding the relevance of the landscape architecture curriculum and profession in the current environment. Although, these research findings can benefit developing BLA curriculum to meet professional standards, it is also recommended to include locality as part of the identity of the program.

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