Challenges of Pharmacy Education in Thailand

Srisombat Nawanopparatsakul, Sindhchai Keokitichai,
Somjade Wiyakarn and Chomjin Chantaraskul

Abstract

Pharmacy education enables pharmacists to deal with the safe and effective use of drugs, primary healthcare, preventative medicine, health promotion and responsible for preparing students to enter into the practice of pharmacy and to function as professionals and informed citizens in a changing health care system. Pharmacy education needs to take a lead role in strengthening pharmacy's image and in establishing duties and responsibilities that others will immediately recognize as being in the pharmacist's domain. There are evolution of pharmacy profession and pharmacy education that have the important role on the future of pharmacy education and there are many factors affecting pharmacy education in Thailand, the important point to develop pharmacy education is the quality of education and service .In the future, faculty of pharmacy must develop both academic and professional organizational to prepare the pharmacists to the health care system and develop good health care system.

Key Words: Pharmacy education, Quality, pharmacist, health care system

Introduction

Pharmacy, like every other healthcare profession, is changing rapidly. Almost every aspect of its knowledge and practice base is affected by external change technological developments; changing patient expectations; patient safety; especially medication errors; quality assurance and quality improvement; informed consumers; accountability; trust and confidence; aging population; increased demand for pharmacy services; challenges of management of patients with chronic conditions; demonstrated benefit of pharmacist services; collaboration with other healthcare professionals; outcomes focus; new professional governance requirements; developments in other professions; a modernizing health service; and acute(commercial) competition in the community sector.

Pharmaceutical Sciences and Practice have made tremendous progress during the last two decades. Several life savings drugs have been discovered during this period and practically some of the diseases have been totally eradicated from the face of this planet but there are some diseases that occur and cannot cure. Pharmacist from the dispenser of medicines has emerged as a knowledge worker who not only dispenses medicines but also is the provider of information on medicines to the patients and other healthcare professionals. On the other side, observing that the pharmacy profession is based on providing for the needs of the society and since the education affects the knowledge gained, skills learnt and attitudes taken, a dynamic approach to pharmacy education is seen. Hence pharmacy practice has expanded from dispensing in retail setting to providing pharmaceutical care with empathy to patients. As the profession of pharmacy is entering the period where the emphasis is on patient care rather than dispensing, the pharmacy education is emulating many of the features of medical education. Currently a strong move throughout the developed countries is towards having records, internationally recognized higher education and quality assurance processes (Suresh, 2001).

Pharmacy education enables pharmacists to deal with the safe and effective use of drugs, primary healthcare, preventative medicine and health promotion. It also emphasizes on the research and development of pharmaceuticals and the production of new drugs. Pharmacy education is responsible for preparing students to enter into the practice of pharmacy

and to function as professionals and informed citizens in a changing health care system. It is responsible for generating and disseminating new knowledge about drugs and about pharmaceutical care systems. Since pharmacy education must prepare pharmacists who can optimize medication therapy in the provision of patient-centered and population–based care, consideration must be given to important societal and health care trends or changes that are likely to influence our future pharmacy practice and education needs. Pharmacy educator should provide sufficient attention to the populations and the impact on health care in order to prepare students to care for these residents. Pharmacy education should serve as a resource and catalyst for the conduct of clinical research in the practice community and prepare students to incorporate a "research culture" in their future practices. Pharmacy education must also teach students to effectively use technology to develop and manage drug distribution systems, to access patient and scientific information, and to optimize patient care provision in a variety of practice settings. Pharmacy education needs to take a lead role in strengthening pharmacy's image and in establishing duties and responsibilities that others will immediately recognize as being in the pharmacist's domain. Pharmacy education will prepare pharmacists to provide patient-centered and population-based care that optimizes medication therapy; to manage health system resources to improve therapeutic outcomes; and to promote health improvement, wellness, and disease prevention. (Babar, 2005; Trinda, 1997; Roche, 2006 and Brink et al, 2006) The profession of pharmacy has evolved in an ever-changing environment. Changes in the profession occurred in the US, in other countries and in Thailand, with the schools of pharmacy as a leading force. Schools of pharmacy play a critical role in determining the quality and quantity of the profession, and thus the capacity of the profession of pharmacy to meet societal needs depends on the capacity that the schools have to prepare the workforce that can meet these needs (Katanawijistrasin, 1997) .

Evolution of pharmacy profession and pharmacy education

Early years of pharmacy education trained the pharmacists in compounding. Globally, pharmacy profession is maturing into a

clinical professional, the job of pharmacist has changed from dispenser to information manager. Demands for clinical practice of pharmacy increased with reduced requirement for compounding, increase in the number of pharmaceuticals, increased awareness of drug related problems and automation in dispensing function. Society has been transform to technology literate and technology driven. Socioeconomic changes have increased the expectations for quality healthcare delivery. The mission of pharmacy is to maximize health and well being of the community. For pharmacy education to move from adequacy to excellence, we need to draw a broad plan that involves: identifying the local and national priorities and key targets to be achieved. (Babar, 2005)

The social roles of the higher pharmacy education are cultivating advanced pharmacy talents, undertaking pharmacy researches and promoting its applications, pushing forward the development of pharmaceutical industry and public health affairs, providing various higher pharmacy educations, these functions are embodied quite good in the higher pharmaceutical education in some developed countries for example in USA, UK , France and Japan. (Suresh, 2001)

The role of pharmacists in the 1950s influenced the role of the academy. Since the focus of pharmacy practice was on the drugs, the focus of educational institutions was on the drugs. By the 1960s there was a strong movement, particular largely within academic pharmacy, academic pharmacy recognized that it was no longer sufficient to focus on the drugs. If pharmacists were to be true healthcare professionals they would have to orient their focus toward the patient. Throughout the later half of the 20th century, the academy assumed greater responsibility for experiential learning and worked at expanding the role of pharmacists within the health care team. Pharmacists would become true drug experts and have responsibilities for therapeutic selection, consultation etc. (Skau, 2007). Since pharmacy education must prepare pharmacists who can optimize medication therapy in the provision of patient-centered and population-based care, consideration must be given to important societal and health care trends or changes that are likely to influence our future pharmacy practice and education needs. Key identified societal and health care trends or changes include the aging of society, greater emphasis on public health, scientific and technological advances,

globalization, market forces in health care, increasing accountability, shortages of faculty and academic leaders, and a changing teaching model. (Roche, 2006)

Background of pharmacy education in Thailand

100 years of Thai pharmacy education will be in 2013. Pharmacy education in Thailand has undergone many changes in the past 90 years. Westernized pharmacy education in Thailand started from three-year courses during 1913-1937 to four-year, five-year programs and recently six-year, Doctor of Pharmacy programs now in operation. The first phase of pharmacy education was from 1913-1935, during which all students studied 3 years to receive a certificate of pharmaceutical production. Pharmacy education expanded to a 4 year program in 1941, and then to a 5-year bachelor's degree program in pharmacy in 1957 and in 1989-1990 development of courses to tracts, areas of interests, including clinical pharmacy aspect in 5 years programs. Currently, another transition in pharmacy education is occurring in Thailand, all Thai pharmacy schools have recently expanded to a 6-year doctor of pharmacy curriculum (PharmD)(Kapol et al, 2008; Chan et al 2005). Right this moment, there are now 17 schools of pharmacy in Thailand, 12 public-funded faculties of pharmacy and 5 private-owned schools. (Sripanidkulchai, 2008) As already decreed and endorsed by the Pharmacy Council of Thailand, the pharmacy professionals governing body-such authority to issue pharmacy licensure for professional practice, all schools of pharmacy in Thailand now must offer only 6-year curriculum. All 6-year pharmacy courses in Thailand must be complied with the core pharmacy course structure guideline as recommended by the pharmacy council of Thailand comprising not less than 140 credit hours for professional contents including professional practice not less than 2,000 practical hours. Practical experiences in the areas of hospital pharmacy and community pharmacy (drugstores) (minimum requirement of 500 practical hours) are compulsory for every pharmacy student. The remaining professional practice time is depend on each individual's interest-hospital, community, research and development, manufacturing, regulation and jurisdiction (FDA), etc. Right after pharmacy graduation, all pharmacy graduates will take the registration examination for the professional licensures, this

process for licensure was applied since 2003-2004 for those pharmacy students graduated from state-/national universities. For those from the private-owned universities and foreign-graduated ones, they have to sit for the licensure examination many decades ago (Kaewkitichai, 2008).

Pharmacy education consortium of Thailand (PECT) was task force and informal meeting in 1977 and formally established in 1988, the members of PECT are all deans of faculty of pharmacy, the goal of PECT is to control the standard of pharmacy education and produce high quality pharmacy graduates. PECT set trends and ability of new generation of pharmacists by 2013 capability in 1) providing pharmacy services (through prescriptions) 2) collaboration with others such as community leaders, doctors, nurses and dentists 3) strategically educating the customers/ patients(health promotion/prevention) 4)accountability (subjected to certain audit process) 5) learning and adjustability and 6) harmonization and global practice (Sripanikulchai, 2008).

Factors affecting pharmacy education in Thailand

The changes occurring in medical education and highlighted a variety of influential "environmental trends" include (1) managed care and the need to recapture the educational mission (2) multidisciplinary perspectives and the need for integrative educational structures (3) the new science of learning, technology, and instructional innovations (4) shifting views of health and disease and need for a responsive curriculum and (5) accountability and new assessment technologies (Skeff et al, 2007) .

Factors affecting Thai pharmacy education are 1) global factors such as technology, free trade, globalization/harmonization, energy crisis etc.2) National factors such as public management quality assurance (PMQA), New financing and budgeting system, student income contingent loan (ICL) ,autonomous universities, new health law(emphasizes on health prevention/promotion) and new student admission system 3) professional factors such as new pharmacy council of Thailand regulation and accreditation (all Pharm D, 6 yr in 2009), increase in member of new pharmacy schools, increase competitiveness (national/international), cross academic discipline(trans-discipline), new emerging technologies and residency program and board certified in

pharmacotherapy and consumer protection (Sripanikulchai B.2008).

To study trend to develop the pharmacy education in Thailand, PECT reports situation analysis by study strength and weakness of mission, culture and management , structure , material, process or system and outcome. Another report from PECT is the situation analysis of opportunities and threats of stakeholder, input, preceptor, graduate, professional organization, social, economic and political (Babar Z. 2005). Another situation analysis evaluated by SWOT analysis in the second meeting of pharmacy education in Thailand, the results were as follows the strength are unity, young staff and experts; the weakness are the ability to accomplishment, body of knowledge and student quality; the opportunity are health services, future distribution need of pharmacist, consumer protection concept, university autonomy and consortium ; the threat are gap to meet client demand, deprofessional, isolation, ethical problems, expanded role of other profession, professional organization and legal commitment (Sripanikulchai, 2008; Tongnopnea, 2002). Undergraduate pharmacy education hadl the following as common obstacles related to undergraduate pharmacy curricula are lack of resources/funds (lecturers, supporting staff, teaching material and books, infrastructure, equipment), lack of coordination between curriculum and practice and between departments within the university, no political will/government support/government policies, lack of recognition within the healthcare system for pharmacists, unavailability of jobs, lack of experience of teachers, inertia/bureaucratic mindset of people, dependency on expatriate knowledge, weak enforcement on the implementation of the new curriculum. The possible and appropriate solutions which are as follows a national political statement, its need to be translated into action and enforced ,government policy on funding, provision to obtain experts, resources, incentives for implementers, active participation of pharmacists in the formulation of national health and drug policies and their implementation, setting up of a statutory body, pharmacy council, training of trainers on trends of practice and education, network and collaboration, meeting of faculties from different universities and bringing committed and motivated people together as a core group, adopting benchmarking and quality assurance from other countries if appropriate, adequate infrastructure, providing adequate

and appropriate employment in the government sector/recognition in the private sector/job security, accreditation of pharmacists' functions, transparency in all steps of planning, identify relevant books and journals, access to electronic libraries of universities/use of internet, virtual visits,share resources on regional centres (Thompson, 2005).

Concept and paradigm to develop pharmacy education in Thailand emphasises on patient-oriented services, produce drug by good manufacturing practice, recommend people how to administration of appropriate drug uses at low cost and counseling the patient to use drug effective safety and good quality of life correlated with professional ethic that produce good pharmacy practice . The effectiveness management of education considers the factor affect on curricula such as the philosophy, objective, the content or knowledge that correlate with the objective, the proper method of teaching. To search the answer of pharmacy education, it must consider the outcomes of education, desired graduate depends on social needs, professional needs and individual needs (Kaewkitichai, 2002). PECT set goal of pharmacy education in next century is to develop pharmacist graduates that have ethic and knowledge leadership, can work with health care team, can help social and consumers, emphasize graduates to solve the problem and have lifelong learning, so the faculty need the educator who have ethic and knowledge to be the model for the process of learning of the students and so we will prepare and keep the educator to work with the faculty. Trend to develop the professional of pharmacy in next century, pharmacy education may change the model of defense to be more push forward and there are many factors affect the management of pharmacy education so we may set guideline for development the performance of the educator in quantity and quality to teach the knowledge and skill to the students and show the clear role of pharmacists. In the future, the development of pharmacy education must have the positive outcome to the students and the educator must have the experience of pharmacist to transfer the knowledge to the students more than the theory and the educator will be at the preceptor to co-develop pharmacy with the preceptor and we will have the standard guideline of desired pharmacist educator and the PECT may set the mechanism together to search desired pharmacist educator to work in the faculty of pharmacy (Kaewkitichai, 2003).

The concept of good pharmacy education is the conceptual framework to manage pharmacy education to produce pharmacist that have knowledge, competence and behaviour and set the desired pharmacists competency into 2 groups; firstly is the outcome of education specific to pharmacist : care-giver, manager, teacher and the other are the propreties of desired graduate and educate people (decision maker, communicator, leader and lifelong learner). From the SWOT analysis, the strategies to develop pharmacy education are adjust the education system, develop lecturer to more professional , adjust teaching method to more student-centered, adjust the curriculum, cooperative education, share resources, develop more specialist, division of roles, new body of knowledge, expand education role, student recruitment and No-NATO(No action talk only). The national and international networking and collaboration can be developed: making curricular changes. To resolve this, they recommended that the universities work with international organizations to get support and resources, conduct seminars with local and international organizations, include expenditure in curriculum development in annual budget, work within capacity, prove that it is important; show outcomes; success stories ,convince administration using data and research from other countries, start with including important topics in a course before having the whole course, vetting and review from other experts (Tongnopnea, 2002). Good pharmacy practice involves four main groups of activities: 1) Activities associated with the promotion of good health, the avoidance of ill-health and the achievement of health objectives 2) activities associated with the supply and use of medicines and of items for the administration of medicines or for other aspects of treatment 3) activities associated with self-care, including advice about and, where appropriate, the supply of a medicine or other treatments for symptoms of ailments that lend themselves to self-treatment and 4) activities associated with influencing the prescribing and use of medicines. The goal of faculty of pharmacy is the good faculty, there are many strategies to be a good faculty such as selection of appropriate students, socialization of students: good infrastructure, good evaluation system, external reviewers ,good training and clerkship, internal and external audits, modernizing and monitoring in learning process, evaluation by students, moderation of

question papers: agreeing on certain standards and accreditation process, exit exam in final year, syllabi workshops, structure-process-outcomes assessment and presentation of new curriculum to various stakeholders. It was also discussed that undergraduate education and health promotion in the globalized world should address global (Kaewkitichai, 2002).

Undergraduate pharmacy curriculum expected outcomes are seven-star pharmacist: care giver, decision maker, communicator, leader, manager, lifelong learner and teacher (Tongnopnea, 2002). Professional competencies that must be achieved by graduates through the professional degree program curriculum are the ability to 1) provide patient care in cooperation with patients 2) manage and use resources of the health care system 3) promote health improvement, wellness, and disease prevention in cooperation with patients (Vlasess, 2008). Standards 2007,6 areas: mission, planning and evaluation, organization and administration, curriculum, students, faculty and staff, and facilities and resources. (Roche, 2006)

Pharmacy students feel the need for different teaching methods, more practical ones, such as case studies, practical courses and internships. Different teaching methods will make education more attractive and effective. Students also expressed a need for good teachers: in several faculties, professors are attached to the university due to research, and not because they are brilliant teachers. Students think professors should also learn proper teaching skills. Students think that basic scientific knowledge is very important for the pharmacist: this gives value to pharmacist in the healthcare system, due to their specific knowledge on drugs that other professionals do not have. Finally, students want to see more flexibility and the opportunity to choose for a certain direction in their education in the last years of their education. This phase would be dedicated to specialization in a certain field of pharmacy (Brink et al 2006).

The evolution of faculty of pharmacy development

Faculty of pharmacy is the source of academic and professional of pharmacy, which has the 4 main tasks. They consist of education, research, service academia and maintain culture include the development of pharmacy professional. The faculty of pharmacy have effective plan

of development and have the clear target include support to solve the health problem of the country. Pharmacists will develop and maintain a commitment to care for, and care about, patients and an in-depth knowledge of medications, biomedical, pharmaceutical sociobehavioral, and clinical sciences.

The PECT proposed the vision of the pharmacy education organization as the organization that support education, create ethic graduate, excellence in pharmacy and help social. The desired graduate would have ethic, excellence in knowledge, skill, experience in pharmacy professional and have leadership depend to help social and country. The mission are support teaching method emphasize on student, support curriculum and management process to create desired graduate to support co-operation between pharmacy professional (include health) organizations (Kaewkitichai, 2003).

The strategies to improve pharmacy curriculum are 1) the formation of an advisory committee on pharmaceutical education in ASEAN 2) to improve collaboration between in ASEAN 3) to look on the possibility of publishing a scientific and professional journals 4)exchange of staff and teaching materials and 5)regular evaluation of programs by a committee(Hussin, 2003).

The PECT proposed the strategies of pharmacy education to 3 phases; 1) create intense of network (now-2013), 2) development to network of knowledge (2014-2020), 3) unity of professional.(2021 -…). The potential and trend to produce pharmacist of different faculties have different identity depend on age and philosophy of each institute. Faculties of pharmacy produce pharmacists from undergraduated curricula, and faculties of pharmacy can open the master degree program to produce M.Pharm. The faculties of pharmacy in Thailand must plan together to produce pharmacists that have the strength of their own faculty and find the proper amount and quality of new pharmacists each year .The faculty that have potential to produce the MPharm may consider to increase quantity and quality more than produce undergraduate pharmacists and build new curricula for research and development for specialist (Sakonchai, 2001).

Recommendations for Pharmacy schools, the expectations of a new curriculum are as follows: future curricula revisions should

emphasize patient-oriented content. The most important competency to provide pharmaceutical care is promoting rational drug use. Product-oriented material should be focused mainly on product differentiation, and extemporaneous and general preparations rather than skills in special product preparation. General competencies should be integrated into core curriculum courses. The most important general competencies needed are to practice within applicable laws, professional standards and ethics, and to communicate and disseminate knowledge effectively. Pharmacy schools should re-evaluate their curriculum periodically to satisfy Thai pharmacy competency standards.

Quality of education and service

It can be said in general that since the quality assurance and control system has officially been introduced into nation–wide education management particularly in higher education, all Thai faculties of pharmacy have complied with this essential regulation. Some schools events make it at benchmarking level(s) of global standards. In terms of assuring quality of services as well as pharmacy graduates, it is to bring into concerns about (1) relevant indicators for quality of services and assurance (2) trends and directions of *e*–services (3) quality assurance system being used (4) benchmarking of satisfaction of services and quality andn (5) public surveys and hearing with competent advisory board. Thus, approaches to create possible "Virtual Institutions" are considered as a challenge of foresight or vision of legislative administration, pharmacy educators and professional bodies. It will be a great shift of focus of education from "Seat Time" to "Competency-Based Learning/Teaching and Evaluations". It is suggested that: If keep it at "Status Quo" then consider it at "Level One"; challenges to advance ahead for greater outcomes and more productivity will be ranked as "Level Two"; assertive and initiative moves to produce innovative strategy and realm of operational plans and actions is "Level Three"; So, the question arising will be "Where is the stance of Faculties of Pharmacy in Thailand?" It may depend upon each individual countries' circumstances and contextual support in higher education. (2) What indicators for measurable results and outcomes of academic duties and services? (3) How far shall we go beyond present situation? A

"Must–To–Do*"* master blueprints for developing an excellent quality of Pharmacy Education and Services is adopted for strategic management. They are startegic operational plan(s) with details and declaration to public via information technology system as well as by other means; Self-Assurance Report (SAR) and documentation of evaluation of such relevant outcomes to publics; and evaluation of development of strategic operational tasks, activities or programme(s). Since there are diverse dimensions of evaluation, they are: dimension I: mission efficacy; dimension II: efficiency of strategic operations; dimension III: higher quality of services; dimension IV: development of organization. Mission efficacy is aimed to measure and evaluate the outputs in accordance with strategic plans as well as to evaluate tasks completed or successful in operational improvement/development. Also, de-regulation and/or regulation in favour of better outcomes and efficacy within timeframes will be considered. On matter(s) dealt with strategy efficiency, what to be considered seriously are the followings (1) strategis reduction of costs and expenditures; (2) to strategically lessen unit time employed in providing services; (3) e-Office(s) with strategically efficient outsourcing (4) relevant measurements of productivity and improvement and (5) strategic management being used. Major factors/KPI, Key Performance Indicators, to justify the quality of services provided by faculties of pharmacy/pharmaceutical sciences will be based upon those KPI for quality of services and assurance themselves. Since advances of higher education management, information technology and telecommunication technology are in extremely development, e-services become more and more in focus with the quality assurance system being used for monitoring and benchmarking of satisfaction of services and quality provided by the academic institutions. Public surveys and hearing with competent advisory board(s) will of course be conducted (Vlasess, 2008).

Academic and professional organizational development

In order to develop and/or improve the quality and competencies of faculties of pharmacy as well as pharmacy profession institutions, in this case: the pharmacy council of Thailand, to meet globally international criteria and standardizations, the following criteria and

strategies are summarized: (1) cost-effectively manpower allocation and re–allocation with optimum sizing; (2) strategic de-regulation and empowerment; (3) strategies of philosophy, missions, goals and expected outcomes for individuals conforming with organizational level(s);(4) strategic development of the controls and auditing; and (5) strategic innovations to better outcomes of services. Every level needs essentially "Joint-Commitment" of all members, personnel and stakeholders involved in the health–related pharmacy education and professions. The "Ultimate Strategies" to manage better such standardized Pharmaceutical Education, Innovative research and services will be "TO LEAD OR TO FOLLOW" in: national/international leader in knowledge transfer; creativity of knowledge–based society with integration concepts of multi-lateral disciplinary ability to come a national source of healthsciences/healthcare–related heritages; provision of academic services with value-added and revenue–generation activities to the organizations; Endurance and/or creativity to support, comprehend and integrate all possible intercorrelated disciplines; To produce pharmacy students and graduates with good/higher academic scholastic capability as well as skills with conscientious and etiquettes; strategic organization management with good-governance; personnel development INQUEST OF LEARNING SOCIETY; through forming/ creat/ sustain partnerships, alliances and quality network, innovative differences can be jointly created; from innovative consideration and lateral thinking, chances and opportunities are openning; then, more and more strategic outcomes can be possibly and relevantly foreseen. Henceforth, aiming to higher level of quality of academic standardization as well as a better conduct of pharmacy professional practices will then be achieved (Kaewkitichai, 2002).

Trend and concept to develop faculty

In order to develop further, it is well-considered to make decision dealing with ideology, knowledge, belief, practice, culture, treatments, measures, standards, etc. right before expanding the management's and stakeholders' vision or foresight into future. For this instance, education reforms for the professional degrees in pharmacy/pharmaceutical sciences and related disciplines with emphasis on high quality of

performance, outcomes and standards may be based upon what educators and stakeholders never ever thought seriously about before. "WHAT" and "HOW" to elaborate "Future Curriculum"? The answer may be "LifeLong Learning Programs" which is an optional shift of route to the successful elaboration of a terminology called **"CCPD"** standing for "Continuing Pharmaceutical Profession Development". Such tangible development in education, management and profession will bring the quality of persons-students, graduates, teaching and supporting personnel, people in communities, and finally the nation-to better qualify as "Talented" or even "Multi-Talented" one(s) needed in global-wide. The strategic development as such may lead to complement faculty's or university's aims for students and graduates to be more satisfactorily self-learning, self-practiced, self-motivated and self-disciplined. The expected ultimate achievable targeted Goals are the OPPORTUNITY for productivity improvement, organization growth and sustainable wealth with a pace at the races with no dismal productivity.

To achieve such relevantly strategic on-going development-in not only education organizations but also other institutions and societies-one needs to adopt: (1) paradigm shift, (2) information-based foresight, (3) strategies with most efficient surviving genomes, (4) performance-focused strategic plans, (5) quality networks and partnerships, (6) activities with value-added prioritization, (7), relevant auditing systems and evaluation for accreditation, (8) revisions of strategies with flexibility, (9) management with Good-Governance Decisive Administration, (10) Personnel and Management working with highly responsibility and senses of loyalty and belonging, (11) strategic budgeting plans and funding allocation for relevant incomes, revenues and expense estimations, (12) financial-based performance monitoring and evaluation, (13) role-specific teamwork with definite TOR and specification of job well–designed / assignment, (14) cost-effective utilization of resources allocated or funded, (15) strategic plans for investment, returning rates of revenues, cost–effectiveness of organization's/personnel performance and projects,(16) strategic management for outsourcing as against value-added expenses and costing, (17) capable practice of lateral thinking with foresight and decisive but broad–minded consideration and (18) good manner self-respect and respecting others.

On the other hands, faculty's and university's ultimate goals in the academic arena increases in research and service activities with all sectors-learning society with rationale of innovative knowledge-efficiency in management, loss minimization, increases of value-chain investment, resources sharing and sustenance of talented personnel. The possible mechanisms to perform excellently and strategically may be to elaborate joint-agreement on common structure of understanding in resources sharing, co-management, co-investment and joint-foresight in trends of futurism. In order to develop and/or improve the quality and competencies of faculties of pharmacy as well as pharmacy profession institutions, in this case: the pharmacy council of Thailand, to meet globally international criteria and standardizations, the following criteria and strategies are summarized: cost-effectively manpower allocation and re–allocation with optimum sizing; strategic de-regulation and empowerment; strategies of philosophy, missions, goals and expected outcomes for individuals conforming with organizational level(s). Every level needs essentially "Jont-Commitment" of all members, personnel and stakeholders involved in the health-related pharmacy education and professions. Henceforth, aiming to higher level of quality of academic standardization as well as a better conduct of pharmacy professional practices will then be achieved.

Pharmacy education needs many developments expecially the manage system to search the desired educator, happy in working, model to teach, the students have the knowledge and skill in professional. May consider the need of quantity and quality of the educator, the increase of new faculty. The management of pharmacy education need the cooperation from every profession associate, pharmacy council, hospital, menufacturer and other organization to coordinate to develop system of pharmacy education and give opportunity to the people to develop the system and may set the image of desired graduate of pharmacist that professional and social need to work in next century.

In the past, the development of faculty of pharmacy (of each faculty) depends on the plan of each faculty. They did not cooperation with other faculties and had some limitations. From the situation analysis, the problems in each faculty are not different and the problems in Thailand and other countries have similar started at the structure of

the faculty and the system of working. It appears that perceptions about faculty development are improving, potential adopters are expanding, and contextual factors are mandating a greater focus on this process. Given these changes, the future for the growth and further dissemination of faculty development in medicine is positive.

Future prospects

The plan for pharmacy development is classified under four broad headings: better access to services; helping patients get the best from their medicines; re-designing services around patients; staff development and clinical governance (Silcock et al, 2004). Education and health policies are two key factors for the future of pharmacists. The mission of pharmacy undergraduate program should focus on nurturing competent pharmacist. The mission of pharmacy graduate program should focus on the research and development in specific field. In addition to setting a clear mission, we will implement a standard pharmacy education program that meets the international standards. The goal of pharmacy education consists of preparing pharmacy students with the appropriate skills, attitudes, knowledge, and values to render them competent professionals (Manasse et al, 2007).

Pharmacy, as the health discipline with practitioners specifically trained and educated in the chemical properties and clinical implications of drug therapy, can play an important role in modern health care, which is growing ever more reliant on biological and pharmaceutical products for patient care. It is pointed out that the health care enterprise needs a pharmacy work force that processes sufficient personnel, training and organizational, technological, and financial resources to protect the public against preventable injury and mortality that can stem from medication use. Pharmacy's preferred future is addressed. The Joint Commission of Pharmacy Practitioners developed a document that details the preferred future for pharmacy to be attained by 2015. the vision document sets forth that pharmacists will communicate and collaborate with patients, caregivers, health care professionals, and qualified support personnel. The changes in the practice of pharmacy, combined with an aging society with chronic diseases and newly approved medications, result in the need for a significantly expanded

pharmacist work force with appropriate education and training Manasse et al, 2007). Societal factors impacting future health care, advances in science and technology potentially impacting both the content and process of teaching/learning, the present and future pipeline of students for pharmacy practice and pharmaceutical sciences research, and the science and technology education of the next generation of potential pharmacists and pharmaceutical scientists (Roche, 2006). To achieve targeted goals under such new contexts of competition and narrow-down globe, interlinking/networking interdisciplinary and multi-disciplinary with integration of holistic strategies-plans, programs, cross-disciplines, resources-can lead successfully to the "HEART of SURVIVAL" and leading paces for: Quality Concordance with Trends of Changes; better and challenges improvement of development strategies; serving the organization's aims, missions, goals, functions and responsible roles in societies and communities ; sustainable development and growth of the organization(s);ongoing strategic competencies and more efficient performance and outcomes**.**

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