

Strengthening the Centre of Research Excellence at Universitas Ma Chung at national and international Level

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Abstract

Higher education reforms happening in Europe, Africa, South-East Asia and all over the world demand changes at higher education institutions. The reforms are a consequence of globalization, expanding access to higher education, new technologies (computer, internet), new concept in public management, formidable competition, and convergence of higher education policies. Universitas Ma Chung as a new university in the midst of competition of 3,673 state and private universities in Indonesia, and universities around the globe, implements higher education management strategies employing a variety of approaches. This paper addresses one of its management strategies using the Project Action Plan (PAP) to strengthen the University Centre of Excellence aiming at sharpening and brightening the colour and excellence in the university research sector at national and international level through four activities which are expected to make impact internally, nationally, and globally. They are (a) a new grand design of the CORE Ma Chung Research Centre for Photosynthetic Pigments (MRCCP) in biotechnology, (b) creating the foundation of excellent research atmosphere, (c) strengthening the existing collaboration and the position in the international consortium, and (d) creating the national consortium in the core area of research. The result of the PAP implementation over eight months shows that (1) a project action plan is a reliable tool for initiating, planning, implementing, controlling, and evaluating a project to help an organization in making a project succeed by determining the time, place, person in charge (PIC), personnel involved, support needed, and is a measuring instrument to gauge detailed success with clear milestones. The PAP-implementation further shows that, (2) the right human resources are the main movers of PAP in particular, and organization in general. It is finally recognized that, (3) the execution of

PAP is determined by a number of internal and external factors that require the art of management and leadership.

Keywords: Higher education reforms, Project Action Plan, management strategy.

Background

The higher education management strategy, especially the one at a new university born in the midst of fierce competition, together with 3,673 state and private universities in Indonesia, needs meticulous and strategic institutional mapping, and has a specific colour to become excellent and quality-oriented. It is for this reason that Universitas Ma Chung decided to choose two particular colours of the University through (1) teaching-learning process prioritizing soft skills development and (2) research. The approach selected to reinforce the two specific colours of the University will be employed through project management. The project would specifically focus on planning, organising, motivating, and controlling resources to achieve unique goals and objectives (Nokes, 2008) The Project Action Plan (PAP) reviewed below expounds PAP approach having a SWOT analysis background on the existence of Universitas Ma Chung in Indonesia, in the city of Malang, East Java, in particular. This city has 52 institutions of higher learning, consisting of 4 state universities and 48 small and big private universities, with the total population of 3,267,294, total area of 3,087.11 km² (BPS Malang City, 2011), and is known as a city of education, tourism, and industry having *Tri Bina Cipta* as its vision. It roughly means 'Three commitments to develop and innovate' in education, tourism, and industry. Malang is a city that reflects the intensity of competitive spirit and challenge in achieving the managerial excellence of higher education.

Reforms of higher education in Europe, Africa, South-East Asia, and the world over are inevitable. Reforms were partly triggered by the Bologna process (with its meetings in Bologna (1999), Prague (2001), Berlin (2003), Bergen (2005), and London (2007) where higher education applied the framework of increased financial flexibility and decentralized responsibility (Gaethgens and Zervakis, 2007). University governance has been adapted in many countries (Mayer, 2008). Generally speaking, as in other developing countries, Indonesia's universities have no specific research field yet that can meet local and national needs, as research requires relatively expensive infra-structure and there is no comprehensive and up-to-date mapping/database in relation to local potentials.

These aspects give the writer – as a participant of the International Deans' Course (IDC) 2012–2013 from Ma Chung University – the background to choose a PAP theme in the field of research aiming at strengthening the university excellence research centre with the objectives of: (1) producing a new grand design for the CORE Ma Chung Research and Development Centre (MCRnDC). The design is to make the Centre the colour of Universitas Ma Chung by conducting research, especially on pigments. By concentrating on pigments, the Centre is expected to become a reference point of pigment in Indonesia and probably many other South-East Asian countries. As far as the writer is concerned, there is no pigment research centre in Indonesia as yet; (2) creating the foundation of excellent research atmosphere; (3) strengthening existing collaborations and enhancing MRCPP existence in international consortium; and (4) developing biopigment consortium at national level.

The impact expected to emerge from PAP application will include: (1) International impacts: gaining international recognition which would result in extensive networking and research support (in terms of equipment, expertise, and joint publications); (2) national impacts: as a pioneer/leading research centre in the field of natural pigments through initiation of a strong consortium and the possibility of securing national research grant and (3) internal impacts: to increase capacity building of researchers (professional development in research fields), increasing publications, research proposals, research grants, and collaborations.

The decision regarding the objectives, activities, and impact in PAP is crucial and needs time allocation, reflection, and profound analysis, which put forward the organizational needs, project resources, budgets, and penetrating risk analysis.

Project Action Plans (PAPs)

The Project Action Plan is one of the reliable tools in changing the nature of university governance, strategic faculty management, and quality management in an integrated manner and systematically exerts a changing impact on managerial routineness which so far has been undertaken by organizations (Mayer, 2008). As the PAP approach also reflects the environment outside of the organization system, it involves a number of stakeholders and the result makes a significant impact on the advancement of the organization which in its implementation requires intellectual and social challenge. The PAP has become a reliable tool in the hands of leaders who are yearning for the development of organizations which would lead to continuous progress. Presumably, educational institutions that apply PAP would have

sustainability and progress as the major elements in PAP also contain financial, institutional, and policy level sustainability. It is the understanding of this PAP which provides the writer with a background to try out the reliability of this tool in making the unique colour of Universitas Ma Chung more vivid in the field of research.

Activities developed in PAP

There are four activities developed in PAP strengthening the centre of research excellence at Universitas Ma Chung at national and international level, which is described using rationales/background of the implementation of the activities and in the form of PAP matrix as follows:

Activity A: New grand design of The CORE Ma Chung Research and Development Centre in biotechnology (MRCPP)

Since Universitas Ma Chung was established on 7 July 2007, Ma Chung Research Centre for Photosynthetic Pigments (MRCPP) has been initiated as the University excellent research pilot project. Even with the awareness and the limitations of infrastructure, the strategy of executing MRCPP as a pilot project has been developed with the spirit and full consciousness of the founders as well as Universitas Ma Chung leaders of the important value of research as one of the spearheads and unique colours of Universitas Ma Chung. It took four years for this centre to consistently carry out its management strategy so that its existence at national and international level can be shown. Since 2011 MRCPP has joined the international consortium of PARC (Photosynthetic Antenna Reaction Centre) under the US Department of Energy, USA, representing Indonesia and South-East Asia whose existence and activities certainly need to be supported by various activities, such as building laboratory facilities (through the launching of the CORE Ma Chung Research and Development Centre); satellite meetings by inviting leaders/researchers from outstanding institutions in Indonesia to introduce MRCPP; and convening of the international conference of Natural Pigment Conference for South-East Asia (NP SEA)

The background to reinforce the existence of MRCPP at this international level is laid as an important foundation in positioning MRCPP of Universitas Ma Chung at international level, and it will certainly make impact at national level and also within the institution. The strengthening of human resources, infrastructure, and system was combined with the execution of an international seminar. The seminar had been initially thought up and ran successfully in 2010, that is the Natural Pigment Conference for South-East Asia (NP-SEA) I. NP SEA will become one of the endeavours to strengthen the consortium at international level by inviting various potential

resources from Ludwig Maximilian University, Germany; Glasgow University, the UK; Osaka City University, Japan; Renmin University, China; and Commissariat à l'énergie atomique et aux énergies alternatives (CEA), Institut de Biologie et de Technologies de Saclay, France. Consolidation of research collaboration will be planned during the conference.

Furthermore the PAP is described in the PAP matrix as follows:

PAP matrix of Activity A

New grand design of The CORE Ma Chung Research and Development Centre in biotechnology (MRCPP)	My role?	When?	Who?	Who else?	What Support?	How to measure?
A.1 Writing up the new grand design of MRCPP: <ul style="list-style-type: none"> • Identification of current condition (internal and external factors); • revise goals, objectives and strategic plans • design the roadmap 	Sharing the commitment and idealism to bring MRCPP as a core research excellence of Universitas Ma Chung	July 1–31	Board of Trustees Vice rectors Director of MRCPP Dean of Faculty of Science and Technology	Human Capital Department Senators; Study centres; Research centres; Academic advisors	Written statement about the core research excellence in academic policy of the University Meeting room, LCD, computer,	Grand design concept: Approved by Board of Trustees and Senate SWOT analysis Strategic Plan Roadmap
Milestone A: New grand design (1 October 2012): It includes SWOT analysis, roadmap, MRCPP strategic planning. This grand design will be provided with a decree regarding MRCCP as the centre of research excellence at Ma Chung University						

Activity B: creating the foundation of excellent research atmosphere

An excellent research atmosphere is a crucial condition that the Research and Development Centre needs in supporting the acceleration and progress of research at the University. There are two kinds of atmosphere in any educational institution that need to be evaluated: academic atmosphere and research atmosphere. At Universitas Ma Chung, we only have the instrument to measure academic atmosphere, but no instrument to calibrate research atmosphere yet. As we have successfully measured our academic atmosphere and used the result to improve Universitas Ma Chung, as a result we were accredited by the Ministry of Education and Culture even when we had not produced graduates. Thanks to our regular academic atmosphere evaluation, as a young university we have been included as one of the best universities in East

Java. Based on this and the experience of our Directorate of Quality Assurance we should be able to evaluate our research atmosphere with confidence.

PAP Matrix of Activity B

Creating the foundation of excellent research atmosphere	When?	Where?	Who?	Who else?	What Support?	How to measure?	
B.1 Tenure system + KPI (publications, research funding, collaboration)	August – March 2013	Universitas Ma Chung	Committee: consisting of a special team representing excellent research centre, lecturers, and researchers	Head of Human Capital Department	Rector's Decree	Online evaluation toward facilities, academic atmosphere and related issues	
B.2 Research facilities + research grants+ Incentives				Head of MRCP	7-floor RnD building		Outcomes from internship activities
B.3 Recruiting excellent researchers				Human Capital Department	Applicants (Researchers),		Number of research proposals
B.4 Internship				Interns			Number of research grants
<p>Milestone B: Tenure system+KPI (October 2012); Research facilities will be obtained through CSR proposal, grant from internal institutions, and international grants (1 year target); research grants (2 national competitive grants, 1 international grant); recruiting excellent young researcher (3 staff); Internship (2 staff) Field trip and gathering (all members)</p>							

Excellent research atmosphere will be evaluated by evaluating the progress of MRCPP work program for the last two years seen from the number of collaboration, the number of research grants, the number of publications, and the scope of internship activities.

Activity C: Strengthening the existing collaborations and the position of MRCPP in the international consortium

Since 2011, MRCPP has joined the international consortium of PARC (Photosynthetic Antenna Reaction Centre) under the US Department of Energy whose existence and activities need to be supported by various activities, and NP-SEA will become one of the efforts to strengthen the consortium at international level by inviting various potential resources from Europe, Japan and China. Consolidation of research collaboration will be planned during the conference.

PAP Matrix of Activity C

Strengthening the existing collaborations and the position of MRCPP in the international consortium	When?	Where?	Who?	Who else?	What Support?	How to measure?
C.1 Launching The Core: Ma Chung Research and Development Centre (MCRnD)	7 July 2012	The CORE: MCRnDC building	Head of MRCPP (acting as Committee chairperson Launching The CORE: MCRnDC Committee	Head of National Research Board (Prof. Dr. Andrianto Handojo) Board of Trustees Ma Chung University leaders and Faculty members Invitees (researchers from universities and industries)	Building. THE CORE: MCRnDC Launching cost to invite 150 guests from all over Indonesia and South East Asia Committee decree	Launching implementation Picture-taking of the inauguration of THE CORE MCRnDC Report of the committee's accountability

Strengthening the existing collaborations and the position of MRCPP in the international consortium	When?	Where?	Who?	Who else?	What Support?	How to measure?
C.2 Satellite meeting to initiate biopigment consortium in Indonesia	7 July 2012	THE CORE: MCRnDC	Head of MRCPP (Committee chairperson)	Researchers from BPPT, Sinar Mas, PT Indoalgae, ITB, Universitas Negeri Malang, Universitas Brawijaya, Universitas Kristen Satya Wacana, Universitas Surabaya, Universitas Ma Chung, Universitas Diponegoro	One-night hotel accommodation Seminar facilities (rooms, lunch and dinner, nacks, and seminar kits)	The consortium agreement. Picture-taking of discussion activities during the consortium establishment
C.3 Conducting Natural Pigment Conference in South-East Asia (II)	12–13 July 2013	THE CORE: MCRnDC	NP-SEA 2013 Committee	Keynote speaker Prof. Richard J. Cogdell (Glasgow University UK) Invited speakers from Germany, China, France, Japan, South East Asia Academics and researchers from South-East Asia with the target of 150 participants	Committee Seminar rooms and all their facilities University bus and cars Initial funds (the committee will also find sponsorships)	Website, brochures, and Holding of the Natural Pigment Conference for South East Asia (NP-SEA) 2013.
Milestone C: Launching THE CORE MCRnDC (7 July 2012) Satellite meeting (7 July 2012): Initiation of biopigment consortium in Indonesia NP-SEA Conference 12–13 July 2013: website, brochures, sponsorship						

Activity D: creating the national consortium in the core area of research

The non-existence of a national consortium in biopigment research is the main reason the MRCCP initiates the formation of biopigment consortium by involving research centres and universities whose mapping is considered very strong in biopigment research, they are ITB, BPPT, UNDIP, UMM, Universitas Negeri Malang, Universitas Brawijaya, UKSW, Universitas Surabaya, Tanjungpura University, PPKS Medan, and industries (PT Indoalgae akuakultur, PT Synergy worldwide, Sekar group) The consortium should become a tool in supporting the synergy of research, such as joint research proposal making, joint research grant acquisition, and joint publication. The parameters to be measured in the initiation of consortium are the draft of consortium, joint research proposal, and MOU-MOA. The draft of consortium should clearly indicate that the MRCCP initiates any MOU or MOA for any collaborative enterprise and how the success of the joint project should be evaluated.

PAP Matrix of Activity D

Creating the national consortium in the core area of research	When?	Where?	Who?	Who else?	What Support?	How to measure?
D.1 Preparing consortium draft and sending it to members for signature.	July–August 2012	Indonesia/ national level	Present collaborators (RC and industry); prospective collaborators (RC and industry); Government (BPKN; East Java)	MRCPP researchers Relevant association/ pro-fessional organization such as HKI, PATPI, HP2I. DAAD Alumni	Staff handling correspondence, drafting, database management	Consortium draft Correspondence Member database
D.2 Conducting satellite meeting (Researcher-industry-government)	13 July 2013	THE CORE: MCRnDC	Consortium members	Director THE CORE: MCRnDC	Meeting rooms and their facilities	Collaborative research proposal
<p>Milestone D: Consortium among several research centres in the field (Diponegoro University, Muhammadiyah Malang University; Satya Wacana Christian University; Universitas Surabaya, Brawijaya University; Malang State University; Tanjungpura University, BPPT; Industries) Follow-up of consortium activities are collaborative research and collaborative proposal with the funding from the Directorate of Higher Education/Research and Technology Ministry (3 proposals/year).</p>						

Outcomes of PAP

The implementation of PAP planned for one year was carried out in eight months with outcomes summarized in the following table:

No.	Activities	Outcomes	% achievements
1.	Revising the grand design of the CORE Ma Chung Research and Development Centre in biotechnology	New grand design	100%
2.	Creating the foundation of excellent research atmosphere	Human resources Research facilities Tenure system Monitoring and evaluation system	50% 50% 100% 100%
3.	Strengthening the existing collaborations and the position of MRCCP in the international consortium through Natural Pigment Conference in South East Asia part II	International conference Joint research projects	50% 100%
4.	Creating the national consortium in the core area of research	National consortium in natural pigments research	100%

The PAP ran on schedule as planned. Generally, the obstacles were due to communication problems and bureaucracy which were beyond the capacity of institution, such as the delay in obtaining signatures regarding the approval for national consortium membership involving several universities in cities in Java and Sumatra.

Key to success

The key to success in implementing the PAP is determined by a number of factors such as (1) the role of a rector accelerates decision making, activity implementation, and integration of cooperation among units and staff. When the organization's highest leader has conviction of the importance of a project, generally s/he will help anyone carrying out PAP to get facilities and support in implementing the project. This key role must become a guide for whosoever is implementing PAP, and s/he should effectively communicate with the organization leader.(2) MRCCP has been operated as a pilot project at Universitas Ma Chung since 2007 and has proven itself as an excellent research centre for the following aspects: (i) the number of publications, research grants secured, and collaboration, (ii) representing South-East Asia in the PARC Consortium, under the support from Department of Energy, the USA, (iii) becoming a pigment research reference in Indonesia, (iv) Universitas Ma Chung members' acknowledgment and (v) Board of Trustee's support; (3) selection of the person in charge and committee with accurate formation (the conceiver should also be the executor in the committee); (4) assertion and

commitment to work according to PAP; and (5) a strong conviction that PAP will succeed (PAP remainder which has not been done) based on work experiences conducted so far.

Lessons learned

PAP undertaken for eight months has given the organization many things, such as the art of implementing strategic management and leadership using simple and reliable tools in initiating, planning, implementing, controlling, and evaluating a project to help organization in making a project succeed by determining the time, place, PIC, personnel involved, support needed, and is a measuring instrument to gauge detailed success with clear milestones. Through this PAP, obstacles can be overcome with some concrete lessons such as:

- (A) selecting and deciding strategic projects based on awareness that internal and external organization conditions through meticulous mapping and analysis is extremely important. Strategic projects with clear goals, which are then presented in a simple PAP matrix, produce management simplification which would enable the project executor to carry out the project effectively and efficiently;
- (B) finding a capable leader and a reliable group to carry out the projects. The PAP prime success is very much determined by the human resources involved in the PAP, the leader and the PAP members. When a project is controlled by a leader and persons who are capable of executing their tasks, have tenacious belief in the importance of the project, work in a harmonious teamwork, and the leader is willing to walk extra miles, led by example, walk the talk, and has the ability in optimizing the participation of all members, fifty per cent of the PAP has actually been completed;
- (C) effective communication is the main glue between the leader and the team members, among team members, and between the team and external parties. Many times based on the experiences of running an organization, it is communication that becomes the main cause for success or failure in implementing organization vision and leadership. Therefore, the emphasis on communication is a must, and it is seriously employed as the main criterion to choose a person in charge and his/her team.

The fourth lesson obtained from this PAP is (4) networking with good partners. The power of networking with good partners is only possible if the organisation is trustworthy, in a mutual position, based on trust and it emerges due to good acquaintance among each other. By believing that every human resource in an

organization brings and has their own networking, a leader should be sensitive in using the networking power and delegating strategic domains mastered by the team to be done by individuals competent in their respective fields.

The PAP tool was firstly implemented at Universitas Ma Chung, and it has proven to deliver a number of valuable lessons which made improvement possible, and which gives additional strategies in higher education management.

Conclusions

After having implemented the PAP “Strengthening The Centre of Research Excellence at Universitas Ma Chung at national and international Level”, several important conclusions can be drawn as follows:

1. State of affairs: Originating from one PAP activity (Strengthening the Centre of Research Excellence at Universitas Ma Chung at National and International Level), MRCPP of Universitas Ma Chung has an opportunity to develop *East Java as the centre for Indonesia seaweed downstream products* (MOU and MOA are still in process)
2. Key to Success: (1) capability/execution power of PAP executors; (2) clarity of goal setting and process; (3) clarity of division of assignment and time; (4) cooperation.
3. Next milestones/next steps of action: (1) *in relation to current PAP*: implementation of the Natural Pigments – South-East Asia 2013 conference; and making MRCPP a “Science Shop” for East Java Province; (2) *Implementing new PAP* on several projects, especially the writer’s role as Humboldt Ambassador; involvement as the person in charge in upgrading professionalism of science teachers in Malang City and PAP to make East Java the centre of Indonesia seaweed downstream products.

In the final analysis, PAP is only a method, a tool, which is kept alive by human beings who know the importance of art in leading, implementing tasks and their responsibility in an organization by upholding their lofty ideals as God’s masterpiece. The following aphorisms have become the power which can be used to sustain PAP:

An empowered organization is one in which individuals have the knowledge, skill, desire, and opportunity to personally succeed in a way that leads to collective organizational success (Stephen Covey)

The result ... is an organization that has developed the most vital core competence of them all – the ability to execute its strategy (Gary Harpst)

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