



ANALYSIS OF ABC MODEL OF ANNUAL RESEARCH PRODUCTIVITY USING ABCD FRAMEWORK

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Abstract:

Higher education institutions ought to be centres of learning as well as knowledge creation. New knowledge is generated through research activities carried out by its faculty. There are various parameters for ranking an institution such as curriculum standards, student placement record, admission demand, high profile faculty, investment and infrastructure facilities, alumni accomplishments etc. Going by this, the prime objective of a higher education institution is often forgotten. ABC model recently developed by Aithal P.S & Suresh Kumar P.M., focus on measuring annual research performance of higher educational institutions. According to this model, an organization can calculate its annual research performance using its annual research output by taking into account the following factors such as the number of articles published in refereed journals, the number of books published, and the number of chapters in edited book or number of business cases published in Journals. Studying the implications of a system or model considering all determinants in key areas and analysing the key issues to identify the effective factors and its critical constituent element is the task of ABCD analysis model. In this paper, we have attempted to apply ABCD analysing technique on ABC model of annual research productivity of higher educational institutions.

Index Terms: ABC Model of Annual Research Productivity, ABCD Analysis of a Model & Research in Higher Educational Institutions

1. Introduction:

There are various parameters for ranking an institution such as curriculum standards, student placement record, admission demand, high profile faculty, investment and infrastructure facilities, alumni accomplishments etc. Going by this, the prime objective of a higher education institution is often forgotten. As to why the performance of higher educational institutions should be based on sole criteria of Institutional Research Performance (IRP). Has been described at length in the recently published ABC model on annual research productivity [1], based on six postulates. This model measures research productivity of higher educational institutions based on calculating institutional research index and weighted research index. The institutional research productivity is calculated using a metric which consists of three institutional variables and one parameter. The three variables are identified as (A) Number of Articles published in peer-reviewed journals, (B) Number of Books published, and (C) Number of Case studies and/or Book Chapters published during a given time of observation. The parameter used is a number of full-time Faculty members (F) which remains constant during the given period of observation.

2. ABC Model:

ABC model for measuring institutional performance [1-3] is based on following postulates.

Postulate 1: The Quality of higher education depends on the ability of the institution in new knowledge creation.

Postulate 2: The ability of new knowledge creation of the institution depends on the institutional research and publications by both faculty members and students.

Postulate 3: The institutional publication is measured by calculating its annual average publications.

Postulate 4: The institutional publication ability is measured by its annual publications in terms of the number of Articles published in Journals (A), the number of Books published in the subjects/Edited volumes (B), and the number of Business cases and Book chapters (C) published.

Postulate 5: The Research productivity (P) of the institution can be measured by knowing research index (α) and weighted research index (β), which shall be calculated using average publications in Journals, average publications of books and an average number of publications of Business cases.

The research index per year (α) is calculated using the formula $\alpha = (2A + 5B + C)/F$, and the weighted research index (β), per year, is calculated using the formula $\beta = (2A + 5B + C)/8F$, where A = No. of publications in Journals in that year, B = No. books published in that year, C = No. of Publications of Business Cases published in that year, and F = No. of full-time Faculty members in that institution during that year. In the above formula, the weightage for a research article A is two and that of book B is five and the case study is one, based on a quantified assumption of the relative significance & efforts involved in generating it arrived at through a summated scaling technique.

Postulate 6: The annual research productivity (research index α) of the organization decides institutional ranking.

Research index is calculated using following formulae:

Research productivity index of the Higher Education Institution = $(2A + 5B + 1C) / F$, where A is number of papers published in reviewed & indexed Journals with ISSN number during a given year, B is number of books published with ISBN number during a given year, and C is sum of number of business cases and book chapters published during a given year. F is number full-time faculty members of the institution during a given year.

Institutional Research productivity index = $[(2A + 5B + 1C) / F]$ ---- (1)

The weighted average is an average in which each quantity to be averaged is assigned a weightage. These weightages determine the relative importance of each quantity on the average. Weightages are the equivalent of having that many like items with the same value involved in the average. Weighted Research productivity index of the Higher Education Institution are calculated using following formula:

Weighted Research Productivity index = $[(2A + 5B + 1C) / 8] / F$ --- (2)

Where A is the number of papers published in reviewed & indexed Journals with ISSN number during a given year, B is the number of books published with ISBN number during a given year, and C is the sum of the number of business cases and book chapters published during a given year. F is number full-time faculty members during a given year [4].

3. About ABCD Framework:

An alternative analysing technique devised by Aithal P.S. et. al. [5] for analyzing any business model/strategy/concept/system and to study its effectiveness in providing value to its stakeholders and sustainable output is named as ABCD analysing technique. Application of ABCD analysis results in an organized list of a business Advantages, Benefits, Constraints, and Disadvantages in a systematic matrix. The entire framework is divided into various identified determinant issues and various key issues affecting the model and analyzed under affecting factors and further derived suitable critical effective elements. This analyzing technique being simple gives a guideline to

identify and analyze the effectiveness of any business model, business strategy, business concept/idea, and business system.

Reshmaet. al. [6], have analyzed the characteristics of "Working from Home" e-business model using 'ABCD Analysis Technique'. Based on various factors which decide the Working from Home system, a model of various factors and their constituent critical elements affecting under organizational objectives, employers point of view, employees point of view, customers/students point of view, environmental/societal point of view and system requirements are derived from a qualitative data collection instrument namely focus group method. It is found that the factors supporting advantages and benefits are more effective compared to constraints and disadvantages of this model so that working from the home model may become more popular from the perspective of employers and employees in the organization in the future.

ABCD analysis framework is used for analysing Black ocean strategy concept [7]. The various factors & their constituent critical factors affecting the BOS concept adopted in some of the business organizations for quick relief from the problems are identified for organizational point of view, administrative point of view, employee point of view, operational point of view, business point of view and external issues point of view are determined under the four constructs - advantages, benefits, constraints, and disadvantages.

ABCD analysis framework is also used for analysing National Assessment and Accreditation Council (NAAC) accreditation process on higher education institutions [8]. The various features of the NAAC accreditation system is evaluated based on identifying and analyzing the advantages, benefits, constraints, and disadvantages of some of the chosen issues like organizational issues, Faculty performance issues, student development/progression issues, social/environmental/community engagement issues, Infrastructure And Learning resources, and Issues on Innovations Creativity and Best Practices. The affecting factors under these issues found out using focus group method and the constituent critical elements under each factor are identified. The result supported the logic of using ABCD analyzing technique in any System/concept performance evaluation.

ABCD analysis framework has been used for analysis of a concept Higher Education Stage Model [9]. The characteristics of the concept are evaluated based on identifying and analyzing the advantages, benefits, constraints, and disadvantages. The result supported the logic of using ABCD analyzing technique in any concept/idea performance evaluation.

In another paper on Study on ABCD Analysis Technique for Business Models, business strategies, Operating Concepts & Business Systems, the author discussed the detailed ABCD framework for quantitative studies and explained how this framework can be used for four specific instances namely Business model, Business strategy, Operational concept and Functional system are outlined here. Finally, ABCD analysing framework is compared with other known analyzing techniques like SWOC, Competitive Profile Matrix (CPM) analysis, EFE & IFE Matrices, BCG analysing frameworks, Porter's Five Forces Model, and PESTLE Analysis [10].

Application of ABCD Analysis Framework on Private University System in India is another paper published using this model in which for six determinant issues related to the functioning of a University has been chosen. These are Organizational aspects, Students Progression, Faculty development, Societal & other stakeholders issues, Governance, Leadership, and Issues on Innovations and Best Practices. Four key issues were identified under each of these and critical constituent elements under these

factors are worked out. Through this analysis, 192 critical constituent elements which satisfy the success of a private university have been explored [11-12]. Recently, another paper on Study of New National Institutional Ranking Framework (NIRF) System using ABCD Framework [13], is published in which the ranking system is evaluated using four constructs Advantages, Benefits, Constraints, and Disadvantages, this system consider all determinant issues in key areas through analyzing the major issues and identifying the critical constituent elements and concluded that NIRF provides a comprehensive ranking suitable for higher educational institutions and it takes care of many small and subtle aspects comparable to quality assessment criterion of National Assessment and Accreditation Council. Apart from using ABCD framework for Qualitative analysis, in several research studies, ABCD analysis is limited and simplified to only listing of various advantages, benefits, constraints, and disadvantages of either concept, models, systems, strategies, technology, or ideas [5]. These studies on ABCD listing [14-23] can be analysed in detail using ABCD framework either qualitatively or quantitatively for further research.

4. ABCD Listing of ABC Model:

Any innovative concept or business model can be analysed using either SWOC or newly developed ABCD analysis method. ABCD analysis contains two varieties as ABCD listing and Application of ABCD framework, which are two models of qualitative analysis method and quantitative analysis method respectively. In this section, we have used ABCD analysis for a qualitative listing of advantages, benefits, constraints and disadvantages of ABC model on annual research productivity.

(a) Advantages of ABC Mode to all Stakeholders :

- ✓ Boost to research
- ✓ Reputation
- ✓ Image
- ✓ Efficiency
- ✓ Spirit of enquiry
- ✓ Research orientation in curriculum
- ✓ Promote employability
- ✓ Integration of research in curriculum
- ✓ Desire to acquire knowledge
- ✓ Enhances superiority
- ✓ Academic opportunity
- ✓ Career development
- ✓ Promotes Scientific temper
- ✓ Pride in institution
- ✓ Preference for admission
- ✓ Acceptability in society
- ✓ Encourages research
- ✓ Co-operation & support
- ✓ Good image
- ✓ Identify productive institutions

(b) Benefits of ABC Model to all Stakeholders

- ✓ More Publications
- ✓ Brand Building
- ✓ Popularity
- ✓ Knowledge creation
- ✓ Enhanced learning practices

- ✓ High standards
- ✓ Enhanced versatility
- ✓ Enriched curriculum
- ✓ Upgrade knowledge
- ✓ Become distinguished
- ✓ Forms of expression
- ✓ Growth and fulfilment
- ✓ Enhances critical thinking
- ✓ Identification
- ✓ Better performance
- ✓ Scope for employment
- ✓ Recognizes worthiness of institution
- ✓ Increased collaboration
- ✓ Trust
- ✓ Tap potentials of the organization

(c) Constraints of ABC Model to all Stakeholders:

- ✓ Motivated Faculty
- ✓ Sustainability
- ✓ Bias
- ✓ Reflect in learning
- ✓ Unending pursuit
- ✓ Necessity to update fast
- ✓ Places greater expectations
- ✓ Limited scope
- ✓ Commitment
- ✓ Team-work
- ✓ Treat to idleness
- ✓ True indicator
- ✓ Inadequate pedagogy
- ✓ Improbability goal attainment
- ✓ Chances of rejection
- ✓ Limited employability skills
- ✓ Absence of feedback
- ✓ Subjectivity
- ✓ Deficit information
- ✓ Unable to deliver expectations

(d) Disadvantages of ABC Model to all Stakeholders:

- ✓ Creating interest
- ✓ Competition with other institutions
- ✓ Single parameter judgment
- ✓ No direct bearing
- ✓ Constant effort
- ✓ Catch-up with time
- ✓ Not essential for all jobs
- ✓ Class with the course structure
- ✓ Motivation
- ✓ Comparison
- ✓ Insecurity
- ✓ Instant rewards

- ✓ Slow result
- ✓ Unhappiness
- ✓ Decreased interest
- ✓ No job guarantee
- ✓ Misinformation
- ✓ Loose support
- ✓ Negative discrimination

5. ABCD Framework Applied to ABC Model:

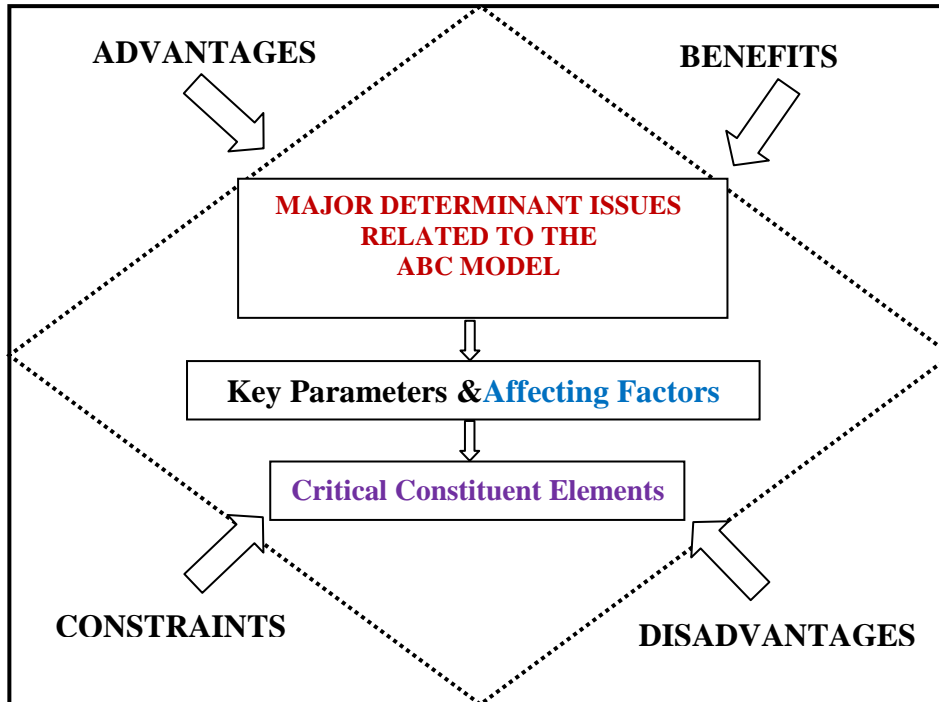


Figure 1: Block diagram of issues affecting the ABC model of organizational performance as per ABCD framework

Advantages, Benefits, Constraints and Disadvantages (ABCD) of a System can be used to analyze and understand the model/system in an effective way. As per this analysis technique [5], the effectiveness of a business model/concept/system can be studied by identifying and analyzing the advantages, benefits, constraints, and disadvantages by considering various determinant issues like organizational objectives, employers and employees perspective, customer/student perspective and environmental/ social perspective. The block diagram of issues affecting the ABC model of organizational performance as per ABCD framework is shown in fig. 1. The various determinant issues affecting the ABC model of annual research productivity of an organization include Organizational issues, Academic & Curriculum Issues, Faculty Issues, Students Issues, and Other Stakeholders Issues. Each determinant issue has sub-issues called key parameters/properties used for analyzing the advantages, benefits, constraints and disadvantages, the four constructs of the framework. The key parameters for ABCD constructs in case of the ABC model of organizational research performance are Research, Ranking, Perception, and Utility. The factors affecting the various determinant issues of the ABC model for each key parameters under four constructs are derived by a qualitative data collection instrument namely, focus group method [24-32] and are listed in table 1.

Table 1: Analysis of ABC Model using ABCD framework

Key Parameters	Advantages	Benefits	Constraints	Disadvantages
Organizational Issues				
Research	Boost to research	More Publications	Motivated Faculty	Creating interest
Ranking	Reputation	Brand Building	Sustainability	Competition with other institutions
Perception	Image	Popularity	Bias	Single parameter judgment
Utility	Efficiency	Knowledge creation	Reflect in learning	No direct bearing
Academic & Curriculum Issues				
Research	Spirit of enquiry	Enhanced learning practices	Unending pursuit	Constant effort
Ranking	Research orientation in curriculum	High standards	Necessity to update fast	Catch-up with time
Perception	Promote employability	Enhanced versatility	Places greater expectations	Not essential for all jobs
Utility	Integration of research in curriculum	Enriched curriculum	Limited scope	Class with the course structure
Faculty Issues				
Research	Desire to acquire knowledge	Upgrade knowledge	Commitment	Motivation
Ranking	Enhances superiority	Become distinguished	Team work	Comparison
Perception	Academic opportunity	Forms of expression	Treat to idleness	Insecurity
Utility	Career development	Growth and fulfillment	True indicator	Instant rewards
Students Issues				
Research	Promotes Scientific temper	Enhances critical thinking	Inadequate pedagogy	Slow result
Ranking	Pride in institution	Identification	Improbability goal attainment	Unhappiness
Perception	Preference for admission	Better performance	Chances of rejection	Decreased interest
Utility	Acceptability in society	Scope for employment	Limited employability skills	No job guarantee
Other Stakeholders Issues				
Research	Encourages research	Recognizes worthiness of institution	Absence of feedback	Misinformation
Ranking	Co-operation & support	Increased collaboration	Subjectivity	Loose support
Perception	Good image	Trust	Deficit information	Negative discrimination
Utility	Identify productive institutions	Tap potentials of the organization	Unable to deliver expectations	Dissatisfaction

Table 2: Advantages of ABC Model

Determinant Issues	Affecting Factor	Critical Constituent Element
Organisational Issues	Boost to research	Creation of new knowledge
		Encourage innovation
	Reputation	Positive and learning culture
		Create a sense of oneness
	Image	Shared and common goals
		Transparency

	Efficiency	Timely planning
		Direction oriented
Academic & Curriculum issues	Spirit of enquiry	Stimulate thinking
		Enhance creativity
	Research orientation in curriculum	Quest for new knowledge
		Analyzing ability
	Promote employability	Vast exposure
		Adoption of knowledge and concepts
	Integration of research in curriculum	Differentiation
		Induce new thinking
Faculty Issues	Desire to acquire knowledge	Abundant resource source
		Availability of time
	Enhances superiority	Continuous up-dating
		Newer ways of thinking
	Academic opportunity	Creation of new knowledge
		Personal improvement
	Career development	Faster growth in the organization
		Trained for Efficiency
Student Issues	Promotes Scientific temper	Identify hidden talents
		Harnessing potential
	Pride in institution	Multiple opportunities
		Multitasking encouraged
	Preference for admission	Strong selection procedures
		Nurture creativity
	Acceptability in society	Being different
		Creation of high value
Other Stakeholders & Public Perception Issues	Encourages research	New contribution to the society
		Increase Skill and competences
	Co-operation & support	Develop good corporate citizenship
		Develop good inter relationship
	Good image	Tie up with research agencies
		Tie up for a good cause
	Identify productive institutions	Quality maintenance
		Benchmarking standards

Table 3: Benefits of ABC Model

Determinant Issues	Affecting Factor	Critical Constituent Element
Organisational issues	More Publications	More exposure
		Institutional and individual growth
	Brand Building	Adaptation to change
		Sustainable growth
	Popularity	Increased competence
		Skill and knowledge accumulation
	Knowledge creation	Scope for new learning
		Consolidated effort
Academic & Curriculum issues	Enhanced learning practices	Multidisciplinary knowledge
		Open to new ideas
	High standards	Learning culture
		Evidence based learning
	Enhanced versatility	Multitasking capability
		Adoption to flexibility
	Enriched curriculum	Self study
		Enhanced reading habits
Faculty Issues	Upgrade knowledge	Motivation towards research
		Scope for knowledge development
	Become distinguished	Increased creation of new knowledge
		Networking with similar people

	Forms of expression	Exhibition of knowledge and skill
		Sharing of information
	Growth and fulfillment	Joy of creation
		Open dialogue
Student Issues	Enhances critical thinking	Positive environment
		Continuous reinforcement
	Identification	Apply theory and concepts
		Continuous involvement
	Better performance	Over all development
		Enhances skills
Scope for employment	Flexibility	
	Multiple skills	
Other Stakeholders & Public Perception Issues	Recognizes worthiness of institution	Maintain standards
		Knowledge pool
	Increased collaboration	Tie -up with corporate
		Tie -up with NGO
	Trust	Continuous growth
		Team effort
	Tap potentials of the organization	Most sought out organization
		Unidirectional

Table 4: Constraints of ABC Model

Determinant Issues	Affecting Factor	Critical Constituent Element
Organisational issues	Motivated Faculty	Talent retention
		Reward and recognition
	Sustainability	Crunch in the talent
		Long term orientation
	Bias	Performance management
		Constant feedback
Reflect in learning	Peer pressure	
	Participation in seminars and conferences	
Academic & Curriculum issues	Unending pursuit	Reservoir of knowledge
		Never ending process
	Necessity to update fast	Change being constant
		Adapt to changes
	Places greater expectations	Time
		Effort
Limited scope	Not interesting to all	
	Self desire	
Faculty Issues	Commitment	Routine Activities
		Directed towards a goal
	Team work	Same interest
		Competitiveness
	Treat to idleness	Idea generation
		Idea materialization
True indicator	Academic orientation	
	Sense of achievement	
Student Issues	Inadequate pedagogy	Additional certification programs
		Add on classes
	Improbability goal attainment	Set achievable goals
		Open dialogue
	Chances of rejection	Self motivation
		Extra learning activities
Limited employability skills	Experiential Learning	
	Hands on experience	
Other Stakeholders & Public Perception	Absence of feedback	Constant feedback
		Setting smart goals

Issues	Subjectivity	Common goals
		Shared vision
	Deficit information	Life skills
		Employability skills
	Unable to deliver expectations	Adequate Motivation
Adequate resources		

Table 5: Disadvantages of ABC Model

Determinant issues	Affecting Factor	Critical Constituent Element
Organisational issues	Creating interest	Constant Motivation
		Need to adapt to changing world
	Competition with other institutions	Latest Technology
		Updating of Resources
Single parameter judgment	Include Quality of Research work	
	Include multidiscipline work	
No direct bearing	Measurable goals	
	Habit of knowledge sharing	
Academic & Curriculum issues	Constant effort	Self direction
		Reward and recognition
	Catch-up with time	Set dead line
		Spilt of work
Not essential for all jobs	Create importance	
	Involvement of research in all activities	
Class with the course structure	Involve research subjects	
	Practical inclusion	
Faculty Issues	Motivation	Encouragement
		Self motivation
	Comparison	Peer pressure
		Set high standards
Insecurity	Open dialogue	
	Open communication	
Instant rewards	Monetary	
	Praise and recognition	
Student Issues	Slow result	Include research activity
		Explain concepts and basics
	Unhappiness	Abstract
		Interested area
Decreased interest	Practical inclusion	
	Best resources	
No job guarantee	Link with the industry	
	Corporate research	
Other Stakeholders & Public Perception Issues	Misinformation	Brand image
		Good communication
	Loose support	Involve all
		Create interest to all
Negative discrimination	Constant communication	
	Wide and transparent	
Dissatisfaction	Value knowledge creation	
	Exhibit knowledge creation	

6. Conclusions:

From the above discussion and analysis, it is seen that the advantages and benefits stand out for the ABC model. It tries to create a research culture in the organisation. This learning environment in the organisation fosters innovation and creation of new knowledge in institutions. It fosters team work and encourages each individual to move up in the career ladder. All in all, we see that the organisation benefits along with the faculties and new knowledge are disseminated to the society.

ABC model can be claimed as a measurable benchmark to growing organisations. It provides a sense of direction and growth to the organisation and the faculty in the organisation.

7. References:

1. Aithal, P. S., & Suresh Kumar, P. M., ABC Model of Research Productivity and Higher Educational Institutional Ranking, Proceedings of National conference on Curriculum Design and Development for Student centric Learning, Mangalore, India, pp.11-22, 2016, ISBN 978-81-929306-9-5.
2. Aithal, P. S., Study of Research Productivity in World Top Business Schools, International Journal of Engineering Research and Modern Education (IJERME), Vol. I, Issue I, pp. 629-644, June 2016.
3. Aithal P. S., Study of Annual Research Productivity in Indian Top Business Schools, International Journal of Scientific Research and Modern Education (IJSRME), Vol. I, Issue I, 2016, pp.402-414.
4. Aithal P. S., How to Increase Research Productivity in Higher Educational Institutions –SIMS Model. International Journal of Scientific Research and Modern Education (IJSRME), Vol. I, Issue I, 2016, pp.447-458.
5. Aithal P. S., Shailashree V. T., Suresh Kumar P. M., A New ABCD Technique to Analyze Business Models & Concepts. International Journal of Management, IT and Engineering (IJMIE), Vol. 5, Issue 4, pp. 409 - 423, April 2015.
6. Reshma, Aithal, P S, Shailashree V T, Sridhar Acharya, P. An Empirical study on working from home – A popular E-business model, International Journal of Advance and Innovative Research, Vol. 2 Issue 2 (I), pp. 12-18, 2015.
7. Aithal, P. S., Shailashree V. T., & Suresh Kumar P. M., Application of ABCD Analysis Model for Black Ocean Strategy. International Journal of Applied Research (IJAR), Vol. 1, Issue 10, pp. 331 - 337, Sept. 2015.
8. Aithal, P. S., Shailashree, V.T., & Suresh Kumar, P. M., Analysis of NAAC Accreditation System using ABCD framework. International Journal of Management, IT and Engineering (IJMIE), Vol. 6, Issue 1, pp. 30 - 44, January 2016.
9. Aithal, P. S., Shailashree V. T., & Suresh Kumar P. M., ABCD analysis of Stage Model in Higher Education. International Journal of Management, IT and Engineering (IJMIE), Vol. 6, Issue 1, pp. 11-24, January 2016.
10. Aithal, P. S., Study on ABCD Analysis Technique for Business Models, Business strategies, Operating Concepts & Business Systems. International Journal in Management and Social Science, Vol. 4, Issue 1, pp. 98-115, 2016.
11. Aithal P. S. & Suresh Kumar, P.M., Opportunities and Challenges for Private Universities in India, International Journal of Management, IT and Engineering (IJMIE), Vol. 6, Issue 1, pp. 88-113, January 2016.
12. Aithal, P. S., Shailashree, V. T., & Suresh Kumar, P. M., Application of ABCD Analysis Framework on Private University System in India. International Journal of Management Sciences and Business Research (IJMSBR), Vol. 5, Issue 4, pp. 159-170, April 2016.
13. Aithal, P. S., Shailashree, V. T., & Suresh Kumar, P. M., The Study of New National Institutional Ranking System using ABCD Framework. International Journal of Current Research and Modern Education (IJCRME), Vol. 1, Issue 1, pp. 389 – 402, May 2016.

14. Sridhar Acharya, P. & Aithal P. S., Concepts of Ideal Electric Energy System FOR production, distribution and utilization. International Journal of Management, IT and Engineering (IJMIE), Vol. 6, Issue 1, pp. 367-379, January 2016.
15. Padmanabha Shenoy, & Aithal P. S., A Study on History of Paper and possible Paper Free World. International Journal of Management, IT and Engineering (IJMIE), Vol. 6, Issue 1, pp. 337-355, January 2016.
16. Aithal, P. S., Comparative Study on MBA Programmes in Private & Public Universities - A case study of MBA programme plan of Srinivas University. International Journal of Management Sciences and Business Research (IJMSBR), Vol. 4, Issue 12, pp. 106-122. December 2015.
17. Aithal P. S., & Shubhrajyotsna Aithal, Impact of On-line Education on Higher Education System. International Journal of Engineering Research and Modern Education (IJERME), Vol. I, Issue I, pp. 225-235, March 2016.
18. Aithal P. S., and Suresh Kumar P. M., Analysis of Choice Based Credit System in Higher Education. International Journal of Engineering Research and Modern Education (IJERME), Vol. I, Issue I, pp. 278-284, May 2016.
19. Varun Shenoy and Aithal P. S., Changing Approaches in Campus Placements - A new futuristic Model. International Journal of Scientific Research and Modern Education (IJSRME), Vol. I, Issue I, pp. 766 - 776, June 2016.
20. Aithal P. S., & Sonia D. N., Hitting Two Birds with One Stone: Srinivas University B.Com. Model in Corporate Auditing. International Journal of Scientific Research and Modern Education (IJSRME), Vol. I, Issue I, pp. 853-869, 2016.
21. Prithi Rao and Aithal, P. S., Green Education Concepts & Strategies in Higher Education Model. International Journal of Scientific Research and Modern Education (IJSRME), Vol. I, Issue I, pp. 793-802, 2016.
22. Aithal P. S., Smart Library Model for Future Generations. International Journal of Engineering Research and Modern Education (IJERME), Vol. I, Issue I, pp. 693-703, 2016.
23. Sridhar Acharya, P., & Aithal, P. S., Impact of Green Energy on Global Warming - A Changing Scenario. International Journal of Scientific Research and Modern Education (IJSRME), Vol. I, Issue I, pp. 838-842, 2016.
24. Rogers, E.M., Diffusion of Innovation', The Free Press, NY, 1995.
25. Aithal P. S., and Shubhrajyotsna Aithal, Ideal Technology Concept & its Realization Opportunity using Nanotechnology, International Journal of Application or Innovation in Engineering & Management (IJAIEEM), Vol. 4, Issue 2, pp. 153 - 164, 2015.
26. Aithal P.S., Mobile Business as an Optimum Model for Ideal Business. International Journal of Management, IT and Engineering (IJMIE), Vol. 5, Issue 7, pp. 146-159, July 2015.
27. Aithal P. S. and Shubhrajyotsna Aithal, An Innovative Education Model to realize Ideal Education System, International Journal of Scientific Research and Management (IJSRME), Vol. 3, Issue 3, pp. 2464 - 2469, March, 2015.
28. Aithal P. S., & Vaikuth Pai, T., Concept of Ideal Software and its Realization Scenarios. International Journal of Scientific Research and Modern Education (IJSRME), Vol. I, Issue I, pp. 826-837, 2016.
29. Varambally, K. V. M., & Aithal, P. S., Mobile Business Technology and Business Proliferation of Banks - A futuristic Approach. Amity Business Review - an Indian Journal, Vol. 10, No. 1, pp. 9 - 25, Jan-June 2009.

30. Aithal P.S. and Varambally K.V.M., Security Issues in Online Financial Transactions with Special Reference to Banking Industry. Quality in Service Sector and Managerial Challenges – Allied Publisher Pvt. Ltd. pp 103- 114, 2006, ISBN:81-7764-992-2,
31. Aithal P. S., and Shubhrajyotsna Aithal, Managing Anticipated Breakthrough Technologies of 21st Century - A Review, International Journal of Research & Development in Technology and Management Sciences, Vol. 21, Issue 6, pp. 112 – 133, 2015.
32. Aithal P. S., Concept of Ideal Business & Its Realization Using E-Business Model. International Journal of Science and Research (IJSR), Vol. 4, Issue 3, pp. 1267 - 1274, March, 2015.