

Connection of Knowledge Management with E-Governance Model for Optimising and Enhancing Professional Education in Higher Educational Institutions.

Prashant Kumar¹ Dr Rajendra Kumar Gupta (Retd),²

¹ Research Scholar, Department of Computer Science, MEWAR UNIVERSITY, Chittorgarh, Rajasthan, India
prashantkumar@yahoo.com

² Associate Professor, Department of Mathematics, S V College Aligarh, Uttar Pradesh, India
rajendrakumar1108@yahoo.com

ABSTRACT

Combination of academic, socio – economic, cultural and technical government perspectives will curtail the gap between theory and practical implementation of Knowledge Management practices in various universities. Knowledge management is crucial in higher education practices that refer knowledge sharing, feedback and communication process as part of the quality improvements. The knowledge management encapsulates gaining, clarification, and communication of professional views for organizational knowledge. In other words, knowledge management defines scalability of leadership behaviors in context of professional education and how technology provides enhancement of sharing, communication for the quality. The paper deals with brief overview of Knowledge management and its principles in educational process. It also presents Knowledge management prototypes that are connected to E-governance model, thus increasing effectiveness in learning professional educational programmes.

Later, analysis and results of factors that contributes to high quality of professional education are shown with the help of decision support system-Decision Oven (0.31).

INTRODUCTION

The following excerpt deals with:

- Importance of knowledge management in professional educational programmes
- Knowledge Management Technologies
- Levels of Knowledge Management

- Knowledge Management Prototypes in connection with E-governance model

(a) Importance of knowledge management in professional educational programmes

- KM helps university to gain appropriate information as well as professional knowledge and applying those using Knowledge Management System (KMS).
- It helps teachers and students to search basic documentation knowledge in less time.
- It makes efficient use of ICT methods to create new innovation theories related to education.
- KM plays vital role in main tasks of any university –Teaching and Research. In context of teaching, it uses various KM tools to facilitate e-learning portal and online transformations at university level. In context of research, seminars, survey are organized and information is distributed to all phases of university.
- It creates modern picture of institution accomplishing latest technology trends for KM.
- It makes knowledge learning interactive and easier among students.

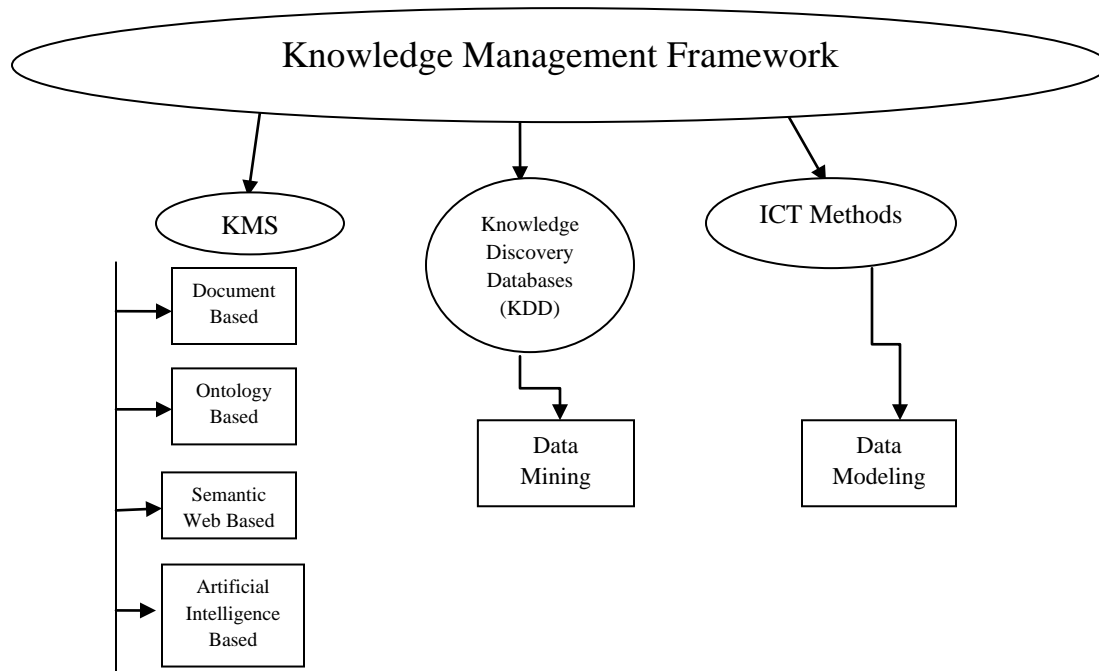
(b) Knowledge Management Technologies

Factors that reduce quality of professional education in various institutes in Delhi are as follows:

- Lack of research groups.
- Lack of enthusiasm and dedication towards work.
- Professors give teaching like business. They focus on spurious concepts instead of pointing to valuable knowledge.
- Lack of innovative teaching and learning
- Misuse of ICT and KM tools.
- Less consistent in decision making.
- Keeps following conventional education norms instead of generating new knowledge.

For maintaining consistency and standardization in educational institutions, various irregularities in aspects of quality education must be removed like Admission process, Scheme of syllabus, training and placement courses etc. There are two factors that can make any university to limit sky in terms of knowledge and skills are: Availability of technology and Knowledge Management (KM). Some universities have benefitted themselves by investing in knowledge

resources while some of them are facing challenges. If we focus on below mentioned technologies, then it is possible to culminate the above discrepancies in process of professional education.



(c) Levels of Knowledge Management

- Knowledge Learning:** - It is process of gathering knowledge from various experiences and survey. In context of gaining knowledge through experiences, it requires working on project planning, research projects, teaching etc. In context of survey, it requires performing case studies, financial and management planning.
 It involves development and supervision of skills and relationships by using KM tools. Learning means to relate explicit (what, who) and tacit knowledge (how, why) together, thus deriving conclusions from tacit knowledge.
- Structuring Knowledge:** - Knowledge can be created but it is useless until it is organized and structured. It is structured and organized in various documentation sources like reports, tables, pictorial representation and case studies.

- **Knowledge Transformation:** - Structured knowledge is transformed and stored in knowledge databases called Repositories. They are shelter for knowledge and information. Without structuring of knowledge, it is difficult to transform it.
- **Knowledge Distribution:** - It is essential to distribute/transfer knowledge to utilize resources within institutions. It is transfer of knowledge to education information seekers through training; KM based systems and centralized MIS. “The more descriptive knowledge is, more liable it is.

(d) Knowledge Management Prototypes in connection with E-governance model.

The word SHOT describes types of KM prototypes where S stands for Socio-Technical Prototype, H stands for Humanist prototype, O stands for Organizational prototype and T stands for Technological Prototype. Each prototype has their own views for managing knowledge in institutions.

- *Socio – Technical Prototype:* - This prototype is used to access information on Library Information System (LIS), Sociology and communications. It is Technical because it uses online library information system to maintain student’s book bank, records and giving details about issued books, late fees etc. It is social because a teacher tries to maintain and increase interaction among students to help them in their career guidance.
- *Humanist Prototype:* - This prototype deals with motivating students towards their study, helps them in choosing right path and making them adaptable to industry environment.
- *Organizational Prototype:* - This system focuses on subject of institution behavior that includes how institutional activities are organized i.e. managing activities (HR department), how much funds can be used to manage efficiently (accounts department).
- *Technological Prototype:* - This prototype is based on usage of KM tools like online MIS, information management, system engineering to develop, share and reuse new information for increasing student’s performance in colleges.

E-governance Model based on KM prototypes

It must satisfy two points:

- It should combine technical issues with organizational and social issues.
- It should develop centralized MIS to access information at one particular place.

It is model that connects these four prototypes and creates new areas of knowledge like MIS, Social Learning, and Interactive communication and so on. Since it connects four prototypes, so model is divided into four intersection fields corresponding to each prototype. The term intersection field is used because any prototype can have common knowledge from other.

Intersection Field	Prototype	Info. Produced	Knowledge	Areas
1	Technological + Organizational	Structured	Explicit	MIS KMS
2	Technological + Socio-Technical	Structured + Semi Structurd	Compre-hensive	Decision Support, Expert Systems
3	Socio-Technical + Humanist	Unstructured + Semi structurd	Tacit	Social learning
4	Organizational + Humanist	NA	Explicit	Institute Behavior, Human Knowled, Innovative Theories

Table 1: Connected Components of knowledge management with E-governance Model

ILLUSTRATION OF DECISION OVEN (0.31) - ONE OF KNOWLEDGE BASED DECISION SUPPORT SYSTEM FOR BRINGING OUT CHANGES IN PROFESSIONAL EDUCATION

The implementation of Decision oven is carried out on basis of sample data collected from various universities by considering following factors:

1. Course contents would be taken for various courses under consideration.
2. Eligibility criteria for different universities / institutions would be considered.
3. Last five years results (available on websites) would be taken.
4. Last five years placements patterns would be observed.
5. Views on the subject would be taken from various stakeholders through Questionnaires and personal interviews.

About Decision Oven:-

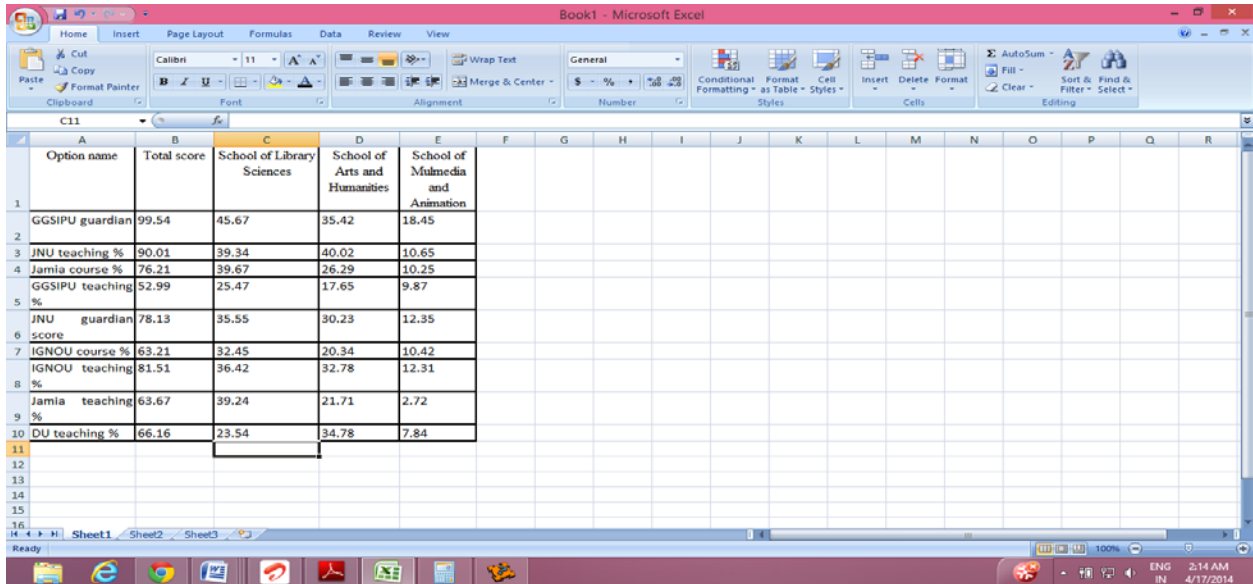
It is free software available to create and implement knowledge base system by finding suitable decisions in form of total score, rankings and setting standard criteria. We have used Decision Oven with version 0.3.1 developed by Data land software. It uses decision matrix strategy for calculating scores of various decisions.

Working of Decision Oven

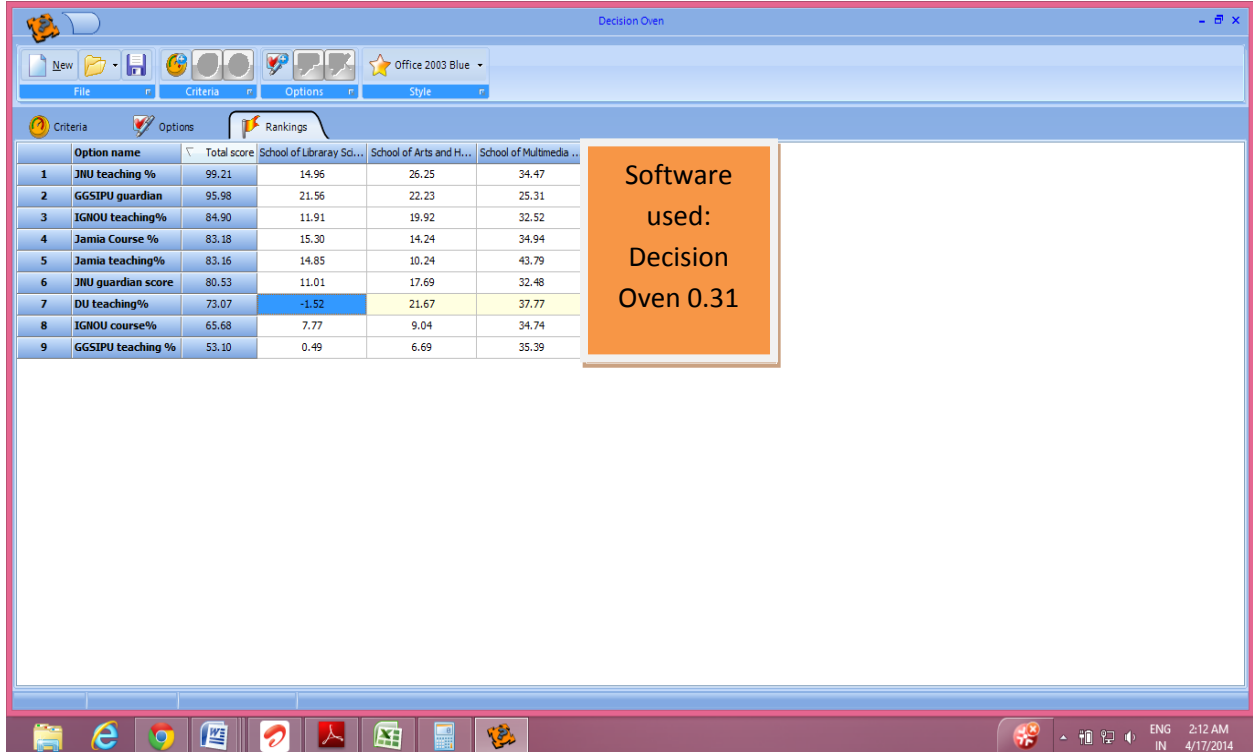
- (i) You need to define criteria that affect your decision and assign weights for each criterion.
- (ii) On the second tab, enter options and values for each criterion: value, subjective score (if criterion is not easily measurable) or Yes/No value.
- (iii) This step generates report in form of rankings by calculating total score. Numbers in green color shows best scores and red color shows worst scores in current dataset.

ANALYSIS PART

(a) Collection of data related to various professional courses in various universities under consideration.



Option name	Total score	School of Library Sciences	School of Arts and Humanities	School of Multimedia and Animation
1 GGSIPU guardian	99.54	45.67	35.42	18.45
2 JNU teaching %	90.01	39.34	40.02	10.65
3 Jamia course %	76.21	39.67	26.29	10.25
4 GGSIPU teaching %	52.99	25.47	17.65	9.87
5 JNU guardian score	78.13	35.55	30.23	12.35
6 IGNOU course %	63.21	32.45	20.34	10.42
7 IGNOU teaching %	81.51	36.42	32.78	12.31
8 Jamia teaching %	63.67	39.24	21.71	2.72
9 DU teaching %	66.16	23.54	34.78	7.84



Option name	Total score	School of Library Sciences	School of Arts and Humanities	School of Multimedia and Animation
1 JNU teaching %	99.21	14.96	26.25	34.47
2 GGSIPU guardian	95.98	21.56	22.23	25.31
3 IGNOU teaching%	84.90	11.91	19.92	32.52
4 Jamia Course %	83.18	15.30	14.24	34.94
5 Jamia teaching%	83.16	14.85	10.24	43.79
6 JNU guardian score	80.53	11.01	17.69	32.48
7 DU teaching%	73.07	-1.52	21.67	37.77
8 IGNOU course%	65.68	7.77	9.04	34.74
9 GGSIPU teaching %	53.10	0.49	6.69	35.39

Software used:
Decision Oven 0.31

(a) Analysis report generated with suitable rankings of various courses offered at various universities

Results of above report in tabular format

Option name	Total score	School of Library Sciences	School of Arts and Humanities	School of Multimedia and Animation
JNU teaching %	99.21	14.96	26.25	34.47
GGSIPIU guardian	95.98	21.56	22.23	25.31
IGNOU teaching%	84.90	11.91	19.92	32.52
Jamia course%	83.18	15.30	14.24	34.94
Jamia teaching%	83.16	14.85	10.24	43.79
JNU guardian score	80.53	11.01	17.69	32.48
DU teaching%	73.07	-1.52	23.67	32.77
IGNOU course%	65.68	7.77	9.04	34.74
GGSIPIU teaching%	53.10	0.49	6.69	35.39

(b) Collection of data showing information about eligibility criteria of few professional courses in different universities in Delhi

Book1 - Microsoft Excel

Home Insert Page Layout Formulas Data Review View

Clipboard Font Alignment Number Styles Cells Editing

C4 passed 12th from CBSE or equivalent with minimum 55% marks along medical

1	ELIGIBILITY CRITERIA				
2					
3	University	Courses offered	Minimum Requirements	Students satisfying criteria %	Students not satisfying criteria %
4	GGSIU	BJMC	passed 12th from CBSE or equivalent with minimum 55% marks along medical	67	33
5	GGSIU	B.LIS (Library Sciences)	Passed 12th and diploma or certification in library information	78	22
6	JNU	MCA	Passed graduation or diploma with one year experience	65	35
7	Delhi University	MCA/MSc	Must be graduate from DU or approved by AICTE UGC	72	28
8	Delhi University	Mass Communication	Passed 12th and diploma in communication	55	45
9	IGNOU	MCA	Graduate with computer awareness	85	15

Sheet1 Sheet2 Sheet3

Ready

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Decision Oven

File Criteria Options Style

Criteria Options Rankings

Option name	Total score	% students satisfying...	% students not satis...
1 IGNOU MCA	244.39	47.06	197.33
2 GGSIU B.Lis	204.24	40.60	163.64
3 DU MCA/Msc	169.82	35.06	134.76
4 GGSIU BJMC	141.15	30.45	110.70
5 JNU MCA	129.67	28.60	101.07
6 DU Mass Com	72.32	19.38	52.94

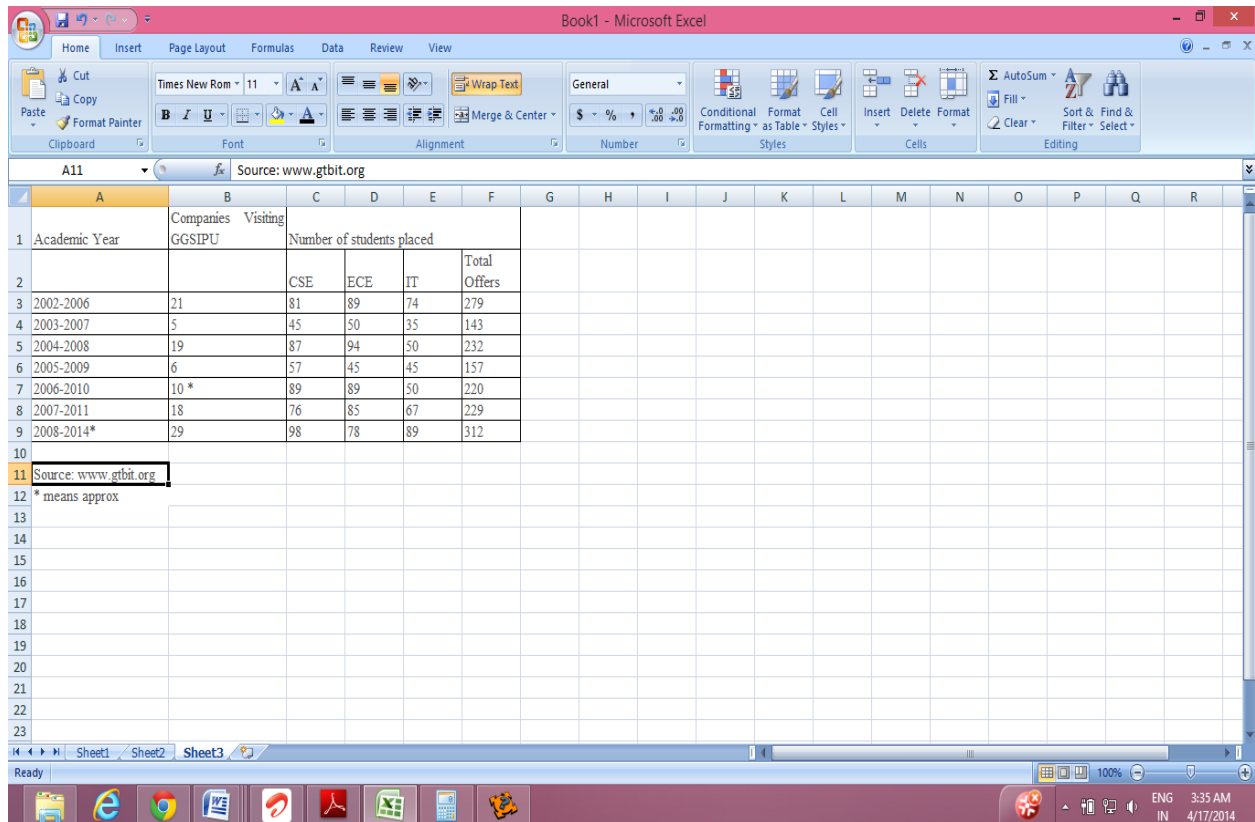
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(b) Analysis report generated with % of eligible students for admission in various professional courses

RESULTS OF ABOVE REPORT IN TABULAR FORM

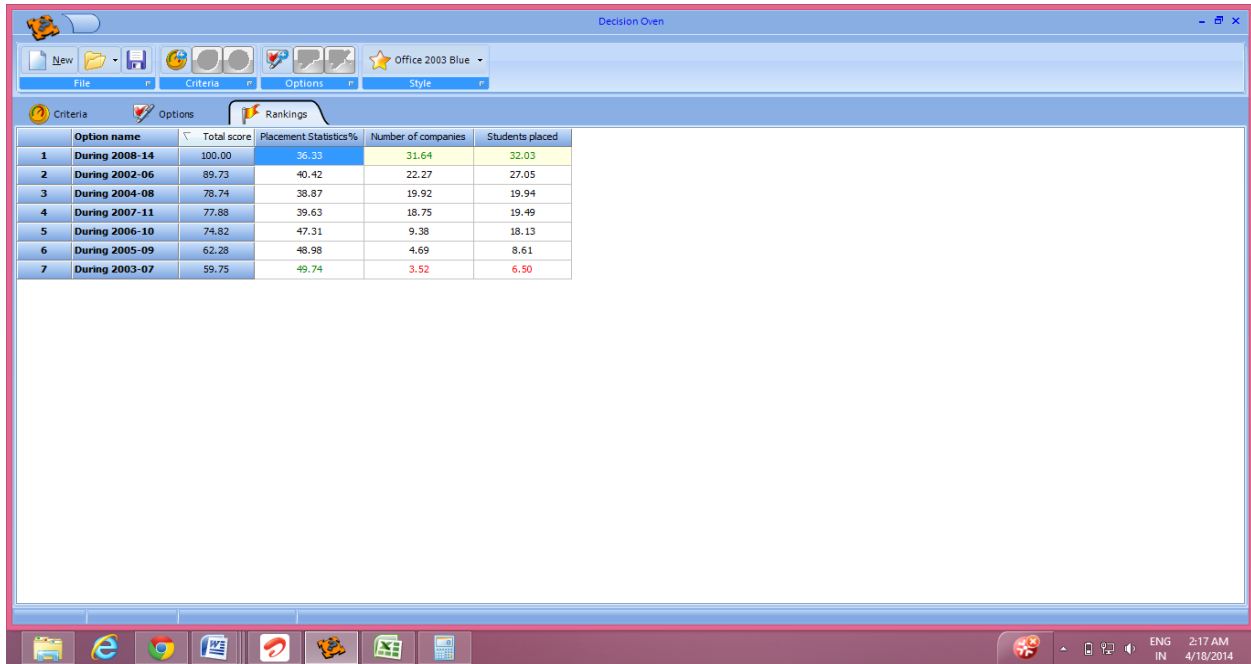
Option Name	Total Score	% Students satisfying criteria	% students not satisfying criteria
IGNOU MCA	244.39	47.06	197.33
GGSIU B.Lis	204.24	40.60	163.64
DU MCA/Msc	169.82	35.06	134.76
GGSIU BJMC	141.15	30.45	22.86
GGSIU B.Tech	57.17	38.89	110.70
JNU MCA	129.67	28.60	101.07
DU Mass Comm.	72.32	19.38	52.94

(c) Placement Statistics of last 5 years of GGSIU



Academic Year	Companies Visiting GGSIU	Number of students placed				Total Offers
		CSE	ECE	IT		
2002-2006	21	81	89	74		279
2003-2007	5	45	50	35		143
2004-2008	19	87	94	50		232
2005-2009	6	57	45	45		157
2006-2010	10 *	89	89	50		220
2007-2011	18	76	85	67		229
2008-2014*	29	98	78	89		312

Source: www.gtbit.org
 * means approx



Option name	Total score	Placement Statistics%	Number of companies	Students placed
1 During 2008-14	100.00	36.33	31.64	32.03
2 During 2002-06	89.73	40.42	22.27	27.05
3 During 2004-08	78.74	38.87	19.92	19.94
4 During 2007-11	77.88	39.63	18.75	19.49
5 During 2006-10	74.82	47.31	9.38	18.13
6 During 2005-09	62.28	48.98	4.69	8.61
7 During 2003-07	59.75	49.74	3.52	6.50

Option Name	Total Score	Placement Statistics %	Number of companies	Students placed
During 2008-14	100.00	36.33	31.64	32.03
During 2002-06	89.73	40.42	22.27	27.05
During 2004-08	78.74	38.87	19.92	19.94
During 2007-11	77.88	39.63	18.75	19.49
During 2006-10	74.82	47.31	9.38	18.13

Report generated showing results of Placement data evaluation in tabular form.

During 2005-09	62.28	48.98	4.69	8.61
During 2003-07	59.75	49.74	3.52	6.50

CONCLUSION

Knowledge Management is one of greatest need to improve education process in various institutions. The process may vary from academic programmes to professional programmes covering all curriculum and administrative activities of institutions. There are two factors that can make any university to limit sky in terms of knowledge and skills are: Availability of technology and Knowledge Management (KM). In various institutions, knowledge management practices are not appropriate and not known. Information is shared among all members of institution because the sharing of information encourages people at every level to contribute, to participate, to interact, to grow, and to learn. It is our duty to encourage professional courses in every university so that students should know about working industries and they must be able to survive in industry on basis of learning through professional programmes. These programmes lead to development of leadership and team management skills among students. These courses are of shorter term as compared to other academic programmes. They focus only on major needs and subjects that are vital to work in any company or organization.

The paper presents results by considering various factors that must be incorporated in professional education with the help of knowledge based decision support system- Decision Oven.

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