

Awareness of the Intellectual Property Right among the Faculty Members of BLDE and SECAB Engineering College Vijayapura (District) Karnataka

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Abstract: *The present study explores the awareness of Intellectual Property Right among the faculty members of engineering BLDE, SECAB engineering colleges in Vijayapura. A survey method of research was used where in structuredquestionnaire was used for collecting required datafrom faculty members of engineering colleges. The study found that majority of the faculty have knowledge about Intellectual Property Rightits types such as patent, copyright, trademark, fair use infringement and rules regulations and policies of IPR.And issues related to privacy and security both print and electronic version. IPR includes: movies, music, software, books paintings, words, symbols, phrases, designs, formulas of the chemical, etc.*

Keywords: Intellectual Property Right. Copy Right, Patent, Trademark, Fair use, Faculties engineering colleges

1. Introduction

Faculty, students of engineering colleges, scientists, and R&D professional are engaged in research and developing new project work in diverse nature, who discover or invents new things and work in the sector or field of industrial property and many of these activities lead to the growth or evolution of the Intellectual property right (IPR) in the different form of, copyright, patent, trademark, designs, instrument, devices, processes, spicemans, software and other information. With the rapid advancement of technology and scientific research, the complexity of the issue has only increased therefore it has been a lot of discoveries new things many invention and innovation or creation have been continue therefore scientists, R&D engineers want to protect their invention hence Intellectual Property Right provide to encourage inventive activities. Intellectual Property is very important for technical education because lot of technical innovations took place in this field so that they protect their knowledge of through Intellectual Property, not only protecting ideas but also it gives licensing and development. Intellectual Property can benefit for an engineers and scientists. Copyright form of Intellectual property protected engineering designs drawings and plan. Engineers or scientist are often involved in making products and innovation in new things. As consultants, they also share intimate details of their clients' designs, materials, products, and processes—highly confidential work.

2. The Concept of Intellectual Property Right

Intellectual property (IP) is a legal field that refers to creations of the mind such as musical, literary, and artistic works; inventions; and symbols, names, images, and designs used in commerce, including copyrights, trademarks, patents, and related rights. Under intellectual property law, the holder of one of these abstract "properties" has certain exclusive rights to the creative work, commercial symbol, or invention by which it is covered. Intellectual property rights are a bundle of

exclusive rights over creations of the mind, both artistic and commercial. The former is covered by copyright laws, which protect creative works such as books, movies, music, paintings, photographs, and software and gives the copyright holder exclusive right to control reproduction or adaptation of such works for a certain period of time.

The second category is collectively known as "industrial properties", as they are typically created and used for industrial or commercial purposes. A patent may be granted for a new, useful, and non-obvious invention, and gives the patent holder a right to prevent others from practicing the invention without a license from the inventor for a certain period of time. A trademark is a distinctive sign which is used to prevent confusion among products at the market place. An industrial design right protects the form of appearance, style or design of an industrial object from infringement. A trade secret is an item of non-public information concerning the commercial practices or proprietary knowledge of a business. Public disclosure of trade secrets may sometimes be illegal. The term "intellectual property" denotes the specific legal rights described above, and not the intellectual work itself.

3. Usefulness of IPRs for engineers

Knowledge of IP adds tremendous monetary value to our work: Many of our engineers come up with very good innovations and inventions, but in absence of knowledge of IPRs, their work goes waste. Knowledge of IP enables you to improve the quality of your own work: A huge ocean of technical knowledge lies untapped in patent databases, which you can access completely free of cost! Knowledge worth millions of dollars is available to you. It can drastically change the quality of your engineering research or even your own efforts to develop something new. This course will teach you how to actually harness the 'power' of intellect to enable your 'creativity' to take off!

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4. Review of Literature

1) (Mark Crawford 2012): Intellectual property (IP) protection is absolutely critical for protecting a company's proprietary designs, processes, and inventions that, if leaked to competitors or made public, could ruin a company's market advantage and reputation or lead to costly litigation. Engineers are often on the front line of innovation. As consultants, they also share intimate details of their clients' designs, materials, products, and processes—highly confidential work. Some scientists, however, are more interested in focusing on the technology and don't always realize the finer (or more nebulous) points of protecting IP. According to the World Intellectual Property Organization (WIPO), intellectual property refers to "creations of the mind: inventions, literary, and artistic works, and symbols, names, images, and designs used in commerce. IP is divided into two categories: industrial property, which includes inventions (patents), trademarks, industrial designs, and geographic indications of source; and copyright, which includes literary and artistic works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs. Rights related to copyright include those of performing artists in their performances, producers of phonograms in their recordings, and those of broadcasters in their radio and television programs." Engineers, then, are professional innovators who work in the realm of industrial property and are often the first involved in creating a proprietary design or invention".

2) Takao Ogiya (2018): The need for education, dissemination and raising the awareness of intellectual property. The intellectual property rights system involves the rights to achievements which result from a broad range of creative human activities, and it protects creators' rights pertaining to their achievements for a certain period of time. In Japan, the Intellectual Property Basic Act defines "Intellectual Property" as "inventions, devices, new varieties of plants, designs, works and other property that is produced through creative activities by human beings, trademarks, trade names and other marks that are used to indicate goods or services in business activities, and trade secrets and other technical or business information that is useful for business activities." A characteristic of intellectual property is that it is not a physical object, but information with property value. Information can be easily imitated and is not exhausted when used, and a large number of people can use it at the same time. As such, the intellectual property rights system restricts—to the extent required by society and to protect the creators' rights—the freedom of using information which could be freely used otherwise. In order to maintain this system design, the creators of intellectual property as well as its beneficiaries must gain a proper understanding of intellectual property and appropriately use the information property system; otherwise it will result in social disarray.

3) Achilles Varies and Marko's Petousis (2014): Undergraduate teaching of engineers should prepare graduates for designing processes and making products to solve real-world problems. As such, an engineering course should enable the development of engineering knowledge, skills, imagination and experience. On the other

hand, intellectual property rights cover topics such as patents, utility models and registered designs among others. These tools are granted for inventions, form and appearance of objects and can be found in every single product available to a lesser or greater extent. This paper reports on teaching aspects of intellectual property rights to undergraduate and postgraduate engineering students as part of the syllabus at a technological university in the Greek island of Crete. The courses are described in terms of goals and procedures which teach students IP rights so as to prepare them to benefit the maximum in today's knowledge-based economy.

5. Need for the Study

The study is undertaken to investigate the knowledge about the Intellectual property right among the faculty of BLDE, and SECAB engineering colleges vijayapura. The faculty of engineering colleges required knowledge about the Intellectual Property right and they should have knowledge regarding importance of the intellectual property for their academic curriculum, proper utilization of intellectual property right and laws. Hence, in the present investigation an attempt is made to undertake to know the awareness of Intellectual Property right, types and its importance.

6. Objective of the Study

- 1) To study the knowledge about different type of Intellectual property right among the faculty of engineering colleges.
- 2) To know the necessity of Intellectual property right at engineering colleges.
- 3) To know the information accessing searching web, Online databases, legally.
- 4) To know the Knowledge about the plagiarism among the faculty of engineering colleges
- 5) To identify the issue related to privacy and security in both the print and electronic form among the faculty.

7. Scope and Limitation of the Study

The present study is mainly based on the primary data collected from sample respondents and the following limitations have been identified. The present study is explorative nature and be restricted geographically to the sample population of only faculty members of engineering colleges BLDE, SECAB and colleges which offers technical education in vijayapura district of Karnataka state. Present study has confined to the intellectual property right, and its types, so in this regard the present study is placed which is highly need of the day.

8. Methodology

For the present study, the survey method of research was carried out. Further, structured Questionnaire was used as data collection tool for collecting required information from the study population. Questionnaire was devised according to the objective and available literature on the topic based on Awareness of the Intellectual property right among the faculty

member of BLDE, SECABengineeringcolleges. Further, appropriate sampling technique was adopted for the selection of the sample. Later, structured questionnaire was distributed among the faculty members who are working in the BLDE, SECAB and engineeringcolleges. Further, appropriate sampling technique was adoptedfor selection of the sample. Later, structured questionnaire distributed among the faculty member who are working in the BLDE, SECABengineering colleges. The data so collected was analyzed, tabulated and interpreted in following section.

9. Analysis and interpretation of the data

Intellectual property play vital role in modern era in advance and important factor affects economic growth. Faculties should have knowledge about the intellectual property right and identifying the issues related copy right material, fair use, free and fee based access to information, fallow laws, regulations, institutional policies using approved password to access the information.

Table 1: Gender wise distribution of the respondents

Sl.no	Gender	Frequency	Percent (%)
1	Male	120	80.0
2	Female	30	20.0
	Total	150	100.0

The above table shows that gender wise distribution of the study sample, it is found that majority of the study population 120 (80%) belong to male category. While, remaining 30(20%) of the respondents belongs to female category. It can be concluded that majority of the study sample belongs to male category only.

Table 2: Age wise distribution of the Respondents

Sl.no	Age of the respondents	Frequency	Percent (%)
1	Less than 35 age	68	45.33%
2	35-45 years	72	48%
3	More than 45 years	10	6.66%
	Total	150	100.0

Table-2 reveals about age wise distribution of the faculty members of engineering college under study. It has been observed that more than 68 (45.33%) of the study sample have less than 35 years of age and remaining, 72(48%) of the respondents were in between 35-45 years of age.

And only 10(6.66%) were more than 45 years.

Table 3: Domicile wise distribution of the respondents

Sl.no	Domicile	Frequency	Percent (%)
1	Rural	14	9.35%
2	Urban	136	90.7
	Total	150	100%

Table- 3 indicates place wise distribution of the respondents under study, greater majority of the study population i.e.136(90.7%) belongs to urban place and while only 14(9.35%) of the study population belongs to rural area. It can be concluded that representation of the study population is less from rural area.

Table 4: Knowledge of copyright act among the faculty members under study

Statements	N	%
Copyright is Legal right Created by Law of Country to safeguard the interest of the intellectual property of authors or creators	105	70%
Copyright law state that research paper must contain such list	22	14.67%
Formatting rules for making a citation, quote, a reference list	10	6.67%
You could be accused of plagiarism if you don't your sources properly	8	5.33%
The use of another's original words or idea as though they were your own	5	3.33%
Total	150	100.00

One of the main objectives of the study was to know the level of awareness of copy right among the faculty members under study. Respondents were asked about the knowledge of copyright act, The above table-4 highlighted that among 150respondents105(70%)of response that they know about the copyright law is legal right, and other 22(14.67%) know copyright law state research paper must contain such list,10(6.67%)state that formatting rules for making a citation, quote, and reference list, 8(5.33%)responses that culprits could be accused of plagiarism, and 5(3.33%) said that the use of another's original words or idea as though they were own.

Table 5: Copyright act provide a privilege of.....

Statements	Responses	
	N=105	%
To seek the permission from the authority	85	80.95
Consult for information	10	9.52
Download the whole text without acting the above (a)	8	7.62
I don't know	2	1.9
Total	105	100%

Above table Shows that thefaculty of Engineering Colleges know about copyright which provides a privilege to 85 (80.95%) who seeks the permission from the authority. And the10 (9.52%) consult for fair use of information and 8(7.62%) said that they download the text without permission and others 2(1.9%) they don't known about copy right act respectively.

Table 6: Knowledge of the Copyright law they can claim the ownership on the material they can create.

Statements	N	Percent
On print material	98	93.33%
Thesis and Dissertation	70	66.67%
Conference proceeding	55	52.38%
Freedom of speech	15	14.29%

The question was asked to the respondents that whether they can claim the ownership on the material they can create or not, it was found thatabove table explains that majority respondent i.e. 98(93.33%)have claimed ownership about that on print material. Followed by 70 (66.67%) onThesis and Dissertation, and 55(52.38%)Conference proceeding, and 15 (14.29%) are claim the Freedom of speech respectively.

Table 7: Knowledge among the faculty members about the copyright ownerto whom

Statement	N=105	Percent
Distribute copies of the work by sale, lease	50	47.61%

or other transfer of ownership		
Discuss issue related to free information and paid information	20	19.04%
They can develop a thesis statement and formulate question	10	9.5%
They can define and modify information	15	14.28%
All of the above	10	9.5%
Total	105	100.0

Claim their certain exclusive rights are.

From the above table 50(47.61%) respondents opined that they claim their certain exclusive right on distribute copies of work by sale, lease or other transfer of ownership, and while 20 (19.04%) respondents claimed on that discuss issues related to free information and paid information, and 10(9.5%) claimed that they can develop a thesis statement and formulate question, likewise 15(14.28%) they that claimed they can define and modify information, and other 10 (9.5%) mentioned that all the above statements respectively.

Table 8: The primary goal of copyright law is to

Statements	Responses	
	N=105	Percent
Protecting and safeguarding the work they have created	78	74.29%
Developing a research strategy	15	14.29%
Gathering main ideas to build new concept	9	8.57%
Identifying the various sources of information	3	2.86%
Total	105	100.00%

The above table indicates that, 78 (74.29%) respondents have opined Protecting and safeguarding the work they have created. And 15(14.29%) respondent says that “Developing a research strategy” and 9(8.57%) respondent pointed out that “gathering main ideas to build new concept”, lastly 3(2.86%) show that identifying the various sources of information.

Table 9: Software protected by copyright

Sl.no	Opinion	Frequency	Percent
1	Yes	105	70.0
2	No	45	30.0
	Total	150	100.0

From the above table is found that majority of the respondents i.e. 105(70.0%) opined that software is protected by copyright law and other respondents 45 (30.0%) says that software is not protected by copyright law.

Table 10: Copyright protection is difficult due to technological advance

Statements	N	Percent (%)
Make content sharing extremely easy and inexpensive	80	76.19%
Identify the gap in collected information	15	14.28%
Respect others ‘idea and backgrounds and acknowledges	8	7.61%
All of the above	2	1.90%
Total	105	100%

From the above table it is found that 80(76.19%) responses that content sharing extremely easy and inexpensive, 15 (14.28%) says that it is difficult to Identify the gap in collected

information due to Copyright protection and technological advance, and 8 (7.61%) responses that, Respect others ‘idea and backgrounds and acknowledges, likewise 2 (1.90%) mention all above.

Table 11: Copying and pasting from internet without citing the internet is violation of Copyright act

Opinion	Frequency	Percent (%)
Yes	80	76.19
No	25	23.80
	105	100.0

The above table interprets that Majority of the respondents 80(76.19%) mention that copying and pasting from the internet can be done without citing the internet page because everything is on internet is common. Followed by other 25(23.80%) respondents who do not agree Copying and pasting from internet without citing the internet.

Table 12: Internet security problems

Statement	N	Percent (%)
Privacy of email messages	54	36%
Tampering with web-site	22	14.66%
Available information could be not in authenticated	30	20%
Document are not stored in one location	16	10.66%
Network are not secure	18	12%
Effective search and browse facilities are not available	10	6.66%
Total	150	100%

From the above table it is observed that 54(36%) of respondents shows that privacy of email messages, and 22(14.66%) opined that tampering with web-site, 30(20%) response that available information could not be authenticated, 16(10.66%) are highlighted that document are not stored in one location, 18(12%) are shows that network are not secure, 10(6.66%) are pointed out that effective search and browse facilities are not available respectively.

Table 13: Information which is available on webpage is reliable.

Statement	respondents	Percent (%)
Credential of authors	87	58%
Background of organization	23	15%
Quality of information	18	12%
Currency of information	22	10.66%
Coverage of the topic	29	12%
Importance of the information	15	6.66%
Total	150	100%

The above table indicates the 87 (58%) respondents says about to know Credential of authors, and 29(19%) Coverage of the topic, and 23 (15%) mention to checking the Background of organization, likewise 22(15%) pointed to know the Currency of information, and 18(12%) to know the Quality of information, and lastly 15 (10%) says that importance of the information respectively.

Table 14: Factors considered for the reliability of website.

Statement	Respondents	Percent (%)
Purpose of website for which it is designed	65	43%

Accountability of website	105	70%
URL address of the website	57	38%
Regular updateness of the website	89	59%
Content of the website	78	52%
Accuracy of the information	40	27%
Total	150	100%

The above table shows 105(70%) faculty are pointed that the site has reliable information to check Accountability of website, and second one is 89(59%) regular up-datedness of the website, and third is 78 (52%) Content of the website, 65(43%) purpose of website for which it is designed, 57(38%), URL address of the website, last one 40(27%) indicate about the accuracy of the information respectively.

Table 15: Is it legal to use images created by another person on your own webpage

Statement	N	Percent (%)
Yes if you scan the image yourself	20	19.0%
Yes if you alter the image	18	17.14%
Yes if the creator give permission	67	63.80%
Total	105	100%

The above table shows that 67(63.80%) faculty opined about legal use of the images created by another person on webpage if only the creator give permission. And followed by others 20 (19.0%) says that if you scan the image yourself, and 18(17.14%) are pointed that ‘Yes if alter the image respectively.

Table 16: Identify Privacy and security of electronic resources

Statements	N	Percent
Use approved password	90	60.4%
Fallow the institutional policy on access to information	101	67.8%
Legally obtain store and disseminate text data image or sound	29	19.5%
Firewall should be installed in the server	43	28.9%
Total	150	100%

The abovetable explains that the majority of the 101 (67.8%) respondents are opinion that identify Privacy and security of electronic resources fallowed by the institutional policy on access to information, and other 90(60.4%) respondent says ‘Use approved password, and 43(28.9%) Firewall should be installed in the server like that 29(19.5% faculty opined that to legally obtain store and disseminate text data image or sound respectively.

Table 17: Knowledge about the Digital Rights Management Techniques among Faculty of Engineering Colleges

Sl.no	Statements	N	Percent
1	Set of access control technologies for restricting the use of preparatory hardware and software which are copy righted	88	58.66%
2	Encryption used common method to protect digital content	19	12.66%
3	Preserve the integrity of information resources equipment system and facility participate in electronic discussion	28	18.66%
4	Digital watermarks is the best provide copyright protection to digital IP and used verify the authenticity or integrity	15	10%
	Total	150	100.00

Above table explain that 88(58.66%) respondents know set of access to control technologies for restricting the use of preparatory hardware and software which are copy righted, and 28(18.66%) faculty opined to Preserve the integrity of information resources equipment system and facility participate in electronic discussion, 19(12.66%) faculty opined for Encryption method to protect digital content, finally 15(10%) faculty members opined for Digital watermarks which provide copyright protection to digital IP and used to verify the authenticity or integrity respectively.

Table 18: Intellectual property shall include rights.

Sl.no	Statements	N	Percent
1	Literary, artistic and scientific works	114	80.9%
2	Performances of performing artists, phonograms and broadcasts	41	29.1%
3	Identifies inaccurate and misleading information	40	28.4%
4	Uses efficient learning techniques to acquire new knowledge	20	14.2%
5	Seeks expert opinion through a variety of mechanism	29	20.6%

It is observed from above table 18 is that majority of respondents 114 (80.9%) opined that Intellectual property shall include the rights like literary, artistic and scientific works, and others 41(29.1%) respondents said about the performances of performing artists, phonograms and broadcasts, 40(28.4%) identifies inaccurate and misleading information, 29(20.6%) pointed to seek expert opinion through a variety of mechanism, last one is 20(14.2%) uses efficient learning techniques to acquire new knowledge respectively.

Table 19: Patent is

S.no	Statements	N	Percent
1	A form of protection provided to authors of original works of authorship including literary and certain other intellectual works both published and unpublished	37	24.0%
2	A property right granted to an inventor to exclude others from making, using, offering for sale, or selling the invention	48	32%
3	A device or technique used in a particular trade or occupation and giving an advantage because not generally known	31	20.66%
4	Maintain records of activities related to information	34	22.66%
	Total	150	99.32%

The above table shows that 48(32%) respondents said about ‘property right granted to an inventor to exclude others from making, using, offering for sale, or selling the invention, and 37(24.0%) A form of protection provided to authors of original works of authorship including literary and certain other intellectual works both published and unpublished, 31(20.66%) respondents said, A device or technique used in a particular trade or occupation and giving an advantage because not generally known, and last 34(22.66%) respondents said patent is to ‘Maintain records of activities related to information.

S.no	Statements	N	Percent (%)
1	Protects the expression of idea	45	30%

2	Trademarks protect brand (eg,trade names and logos)	66	44%
3	Any right over creation of the mind or product of intellect	25	16.66%
4	Cover the musical, literary, artistic, invention and discoveries	14	9.33%
	Total	150	99.99%

Trademark is

The above table shows that 66 (44%) respondents well known about Trademarks protect brand (eg, trade names and logos), like that 45 (30%) respondents mention that Protect the expression of idea, and others 25 (16.66%) said the any right over creation of the mind or product of intellect, lastly 14 (9.33%) responses that Cover the musical, literary, artistic, invention and discoveries.

S.no	Statements	N	(%)
1	Copyright owner have the right to control the reproduction of their work	80	77.7%
2	The Exclusive right of copyright to display the work publically	40	38.8%
3	The Exclusive rights to reproduce, or copy the work	42	40.8%
4	Breaking a rules, law, and agreement violation	4	3.9%

Infringement of copyright

The above table describe the majority of respondent don't know about the Infringement of copyright 80 (77.7%) that is Copyright owner have the right to control the reproduction of their work, and 42 (40.8%) respondents mentioned that exclusive rights to reproduce, or copy the work, and 40 (38.8%) says that exclusive right of copyright to display the work publically, and but only 4 (3.9%) correctly known about the Breaking a rules, law, and agreement violation.

Table 22: Fair use of information is nothing but.

S. No	Statements	N	Percent (%)
1	Fair use means any copying of copyrighted material done for limited	86	62.8%
2	Determine the accuracy of the information	53	38.7%
3	Combine the new and prior of information (paraphrasing and clarify terms)	56	40.9%
4	Integrate new information into an existing body of knowledge	69	50.4%

The above table revealed that majority of respondents 86 (62.8%) point out that Fair use means any copying of copyrighted material done for limited, and others don't know about fair use but 69 (50.4%) mention that Integrate new information into an existing body of knowledge, other 56 (40.9%) says to Combine the new and prior of information (paraphrasing and clarify terms), like that 53 (38.7%) says that Determine the accuracy of the information.

Table 23: Plagiarism is serious academic offence.

Statements	N	Percent
Very serious offence	88	58.66%
Somewhat serious	35	23.33%
Not serious offence	27	18%
Total	150	99.99%

The above table revealed that 88 (58.66%) respondent said that plagiarism is serious academic offence, whereas 35 (23.33%) says that somewhat serious, 27 (18%) opined that not serious offence respectively.

Table 24: Software of Plagiarism

Statement	N	(%)
TURNITIN	79	76.7%
I-AUTHENTICATE	32	31.1%
URKAND	50	48.5%

The above table revealed that 79 (76.7%) respondent known about the software of plagiarism is "TURNITIN" and other second most highest 50 (48.5%) known about the URKAND, and like that 32 (31.1%) respondents known about I-AUTHENTICATE. It can be concluded that majority of the respondents know about Plagiarism Software.

10. Conclusion

The Intellectual Property Rights (IPR) such as patents, trademarks, service marks, industrial design registration, copy rights and trade secrets. It is important for technical education and engineers that they should understand the value of the intellectual property right. Engineering's creating or creative profession and every engineer shall create innovate for the solutions to new problems in every day every aspect of our modern lives. Engineering innovations have created our homes and buildings, our modes of transportation and communications, transformed our recreational activities and created all the conveniences of modern daily life. Therefore it creates awareness on IPR through conducting seminars, conferences, invited talks and lectures, and training programs among the academic community.

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