

Building Choice Based Internships: An approach during COVID-19

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ABSTRACT: COVID-19 pandemic has affected every sector of life and poses a whole lot of challenges to the universities and higher education institutions across the globe. Universities have gone online for teaching, learning, assessment but providing students with meaningful Internships is a great challenge. In today's competitive world, Internships are helpful to everybody – students, employers and universities. Internship provides an opportunity to the students to gain exposure and experience the work life challenges. It also helps students learning industry skills and aligning their learning path to career progression goals. The objective of this study is to understand how the internship is getting impacted and evolving with COVID-19 and how does it affect the students learning and employability. This research was designed as a mixed mode of research to discover significant changes in the internships during COVID-19 crisis and its effect on learning outcome from the students and faculty point of view. Firstly, the paper introduces and discusses a novel approach, Choice Based Internship (CBI) model, adopted by OP Jindal University, India, to handle internship programs during COVID-19 crisis. Secondly, the paper analyzes students' state of mind and thought process in the context of this new CBI model and finally, it envisages the impact of this new internship model on Learning Outcomes (LOs) from the data collated from faculty and students.

I. INTRODUCTION

This section introduces the concept of internship with the help of the literature and provides an overview and status of it in higher education, why it should be made an integral part of the curricula and how it should be conducted for maximizing the benefits to students.

A. Internships in higher education

If universities and higher education institutes want to stay relevant in the globally competitive world, then they must evolve and prepare the students to face the challenges of ever evolving global economy and changing market scenario. Internships play a crucial role in shaping the skills and personality of a student for his future career and a large number of empirical research is recording and verifying the positive benefits of internships [1,2,3,4,5]. Universities should continuously upgrade their curricula and pedagogical approaches to address the needs of the market. There are two important reasons behind continuous updating and change in the curricular since approximately 100 years. First is to serve the employer's interest and cater to the growing student market; and second is to prepare the graduates for the industry and corporate world [6]. Barnett further illustrates that there is a paradigm shift in the job market and industries & corporates are looking for people with employability skills so that they can be productive and perform the job from day one, irrespective of the knowledge they possess.

To enhance employability work related learning and work-based learning have been introduced in the higher education pedagogies. As per Quality and Curriculum Authority's definition for work related learning, cited by Brenda, these are "planned activities that use the context of work to develop knowledge, skills and understanding useful in work, including learning through the experience of work, learning about work and working practices, and learning the skills for work" [7]. Boud et al defines work based learning as "Learning at higher education level derived from undertaking paid or unpaid work" [8]. Work based learning is indeed the internship in higher education jargon and credits for internship module are being offered for nearly 100 years [9]. However, people widely admitted that there is no well-defined standard definitions and consistent terminologies for handling internships effectively by universities and carrying out studies by different researchers [4]. Research indicates that approximately 90 percent of colleges offer their students some or other type of credit based internship or work-related learning experience [10,11].

B. Internship Benefits

The provision of industry internship modules as a part of the curriculum furnishes benefits to the stakeholders of the higher education. Cook et al point out that work based education benefits everybody including students, employers and higher education institute [10]. Maertz et al further identifies three main advantages for interns and

could be beneficial for his job, career and professional networking[9]. It provides a win-win situation to all the stakeholders, students get an opportunity to gain valuable applied experience and make networks with the professionals of the fields of their career paths; and at the same time gives employers an opportunity to guide and evaluate the candidate for future needs. At a time, when universities and institutions are concerned to demonstrate the employability of their students, internships are being aggressively flaunted as valuable 'high-impact' practices [12]. A significant body of literature, e.g. Bonwell&Eisona, advocates that students learn most effectively through active learning when they do something with their knowledge[13]. Internships allow students to connect their theoretical learning of the classroom to the practical experience and exposure of the workplace [14].

Two empirical studies carried out by Harvey et al. and Johnson and Burden, show that the work based learning experienced by students during their education, i.e. internship, is an invaluable contribution for the professional growth and personal developments of students [15,16]. Through this small duration professional work exposure, students receive an "inside track" that helps him finding a post-college employment and thus it plays a very important role for fresh college graduates in a depressed scenario of job market across the globe[17,18]. Interview participants firmly believe internship is important for students with regard to three areas: providing opportunities for development of career skills, enabling career discovery, and helping students with full-time job acquisition [19]. Maertz et al pointed out that the students who have undergone an internship receive better salaries and more job offers compared to those who have not undergone an internship [9]. A research carried out by Gault et al. to examine the relationship between internship and early career success suggests that undergraduates who undergo an internship receive early career advantage compared to undergraduates who do not undergo an internship during their programs [11].

There are many anecdotal evidence and empirical studies available to indicate that internships can have significant benefits and is very popular with many employing organizations, educational institutions, and students [20,21]. The research literature has examined their use across many different job types and industries [22]. However, there is also ample evidence that suggests potential problems may occur with internships[23].

C. Internship conduction:

The purpose of internship is that the students should be able to learn from the industry exposure and experience. The basic goal of any internship module is learning by application of knowledge and skills. Successful work based learning gives benefit not only to the students but also to all other stakeholders as well including the society. Internship should be planned very well and implemented as a valid learning experience [24]. An effective learning experience, to a larger extent, is reflected by competence development of the students to implement a strategic intervention, which is better acquired through hands-on experience rather than the classroom teaching[25].

Internships are commonly treated as co-curricular activities that may enhance employability and earnings of the students as well as meeting employer talent needs [18, 9]. As a result, many governments, universities and higher education institutions across the globe look at internships as a foundation to their employability policies and for some courses, has made it mandatory for graduation [26]. In India too, internship is compulsory for engineering and management courses. As per All India Council of Technical Education (AICTE), the apex body of technical education, three internships of duration 4-8 weeks are mandatory requirements for the award of degree. Though research and policy relating to technical fields have emphasized professional competencies such as teamwork, communication, and professionalism, many different studies suggest that the internship postings greatly emphasized technical skills at the expense of general competencies. Internship is the new phenomena that appears in the university education with implicit legitimacy of the module because of perceived significant career advantages for undergraduates with internship experience that benefit not only for the students but also for the university, employers and other stakeholders too.

II. PROPOSED MODEL DURING COVID-19

A. Situation

In this paper we have taken the timeline of COVID-19 of India but the things are almost same everywhere, except shifting of the timescale a little bit here and there. Govt of India declared the closing of institutions on 16 March 2020 and a further announced of lockdown 1.0 on 24 March 2020, followed by lockdown 2.0, 3.0 and 4.0 spanning over more than 02 months and we understand that the world will not come back to normalcy anytime soon. Almost all the universities and higher education institutes are working in an online virtual mode and are concerned with the career of their students. This is high time for the students to apply for and undergo internships but COVID-19 restrictions, like social distancing, restricted movements etc, appended by closing down of economic activities created a huge problem for internships of students in higher education. In this regard it is desired to identify a new paradigm of the internship conduction from the point of view of the COVID-19 crisis and economic slowdown.

B. Choice Based Internship Model

Looking at the COVID-19 situation, University Grants Commission (UGC), AICTE and apex bodies of the higher education system in India, has suggested delaying the start of the internship or reducing the period of internship and/or clubbing it with assignments. The guidelines from these apex bodies encouraged the universities to evolve and adapt their own model for internships, which is apt for the situation and changing scenario. OP Jindal University, India (OPJU) evolved a Choice Based Internship (CBI) model for the effective engagement of students and serving the purpose of internship and credits of the course. We call this as Choice Based because it includes many different options for internship programs and students can select an appropriate option or even combine options as per his choices. The different options of CBI model are as below:

- **Physical Internships:** The students can opt for physical internships with a company that takes proper care of social distancing, sanitization, and assures safety against COVID-19 outbreak. This is routine Internship mode but this time it comes with lot of restrictions and constraints because of COVID-19 situation.
- **Virtual Internships:** The students can opt for virtual internships, in the form of Work from Home (WFH) model, offered by various companies or by various websites like Internshala, letsintern, etc. This is indeed an online WFH version of Physical Internship.
- **Online Courses:** The students can opt for any relevant course from a credible online platform with approx. 70-100 hours including hands-on with the projects. They can even club different courses or different options form CBI model to design their own learning path.
- **Research and Projects:** It encourage students to work on innovative research and projects, publish papers, join conferences and participate in different hackathons/competitions. Students need to specify a problem statement and get approval from the concerned department. He must submit a weekly plan, project flow, and weekly progress report and complete documentation to the faculty mentor.
- **Entrepreneurship and Startup:** The university has an established innovation and entrepreneurship cell that provides support and mentoring to the students to get into the entrepreneurship domain and make the best use of COVID-19 time. A detailed report that includes ideation, case study, feasibility, challenges, finance, etc., is desired to opt this.
- **University Offerings:** As per the guideline of the UGC and AICTE, all the schools of university are offering project-based internship courses to the students like Artificial Intelligence, Machine Learning, Data Analytics, Business 4.0, and Industry 4.0, Digital Marketing etc.

An internship can serve many different purposes for different students in different manners. Different students have different reasons and purposes for pursuing an internship e.g. to explore oneself, to examine career options, to make professional connections, to learn from industry, to develop practical skills and many more. All the different choices of CBI offer suitable options, during COVID-19 situation, to students to pursue and explore their interest by suitable opting for an Internship choice. Of-course all the modules cannot ensure achieving basic objectives of the internship but offers best possible benefits during COVID-19 crisis time. All the modules have faculty mentors associated with it who tracks the progress in a structured manner and intervene at appropriate places to ensure the outcomes.

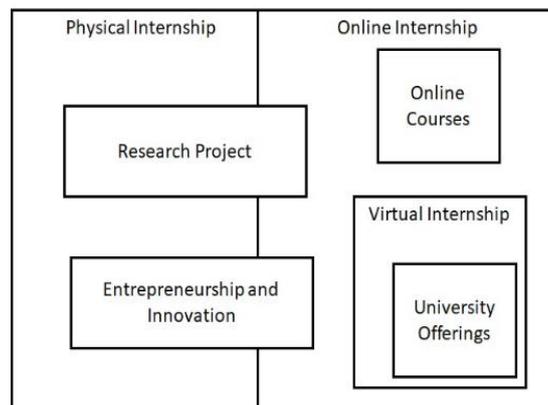


Fig 1: Choice Based Internship Model during COVID-19

III. PURPOSE AND METHODOLOGY

A. Significance of the Study

COVID-19 has disrupted normal functioning of the educational institutions and forced them to go online. As many of the industries, corporates and their operations and have been hit hard and so it’s affecting both recruitment and internship hiring. This study aims to evaluate the impact of COVID-19 on the internship programs of universities and how does it further affects the learning and employability. This paper discusses the new proposed CBI model and tries to capture the students’ thought process behind choosing an internship option and the expected impact on the learning outcomes in the context of this new internship model during COVID-19.

B. Hypotheses

The hypotheses for this paper are:

- H1:COVID-19 has affected and constricted the opportunities of internships
- H2:COVID-19 has influenced the students’ choice for internship offerings
- H3:Internships during COVID-19 affects students’ employability
- H4:Internships in the COVID-19 crisis have an impact on LOs

C. Research Methodology

The study collected primary data from second, fourth and sixth semester students of School of Engineering(SoE) and School of Management(SoM), who are supposed to undergo internship during May -June-July 2020. This study is a quantitative research but in order to gauge the COVID-19 impact better, some qualitative elements have also been incorporated into it. The study employed both statistical and descriptive analyses to evaluate the impact of COVID-19 on internship programs.

The research questions here are:

- What types of internships are preferred and why during COVID-19 crisis vis-a-vis without COVID-19?
- How COVID-19 crisis and hybrid Internship model impacts on achieving the objectives of the Internships from the student’s perspective?
- How COVID-19 may impact on learning outcomes of an internship program from the faculty point of view?

D. Data Collection

We used a structured moodle quiz questionnaire to collect the data. First three parts of the questionnaire were open-ended and last two part were on an Ordinal-scale/Likert-scale survey. Part I provides demographic information; Part II helps selecting an internship option of CBIand driving reasons for the choice during COVID-19. To assess impact, interns were asked to provide data regarding their choice and rational behind their choice. To elicit students’ accounts, we use the free listing method to record the words or phrases that are most important to students as they choose an option of internships in part II.Part III tries to figure out what would have been the choice under normal situation with CBI model without COVID-19and driving factors for the same. Part IVintends at assessing the impact on internship outcomes due to CBI model under COVID-19 situation from the students’ perspective and part V tries to gauge the impact on LOs for the same from the faculty point of view.

E. Population and Demography -

Engineering students, of the participating university, typically undergo internships during 4th and 6thsemesters and management students undergo internships module during 2ndand 4th semesters. The

Table 1: Percentage and frequency distribution of student’s demography

Item	Frequency	Percentage (%)
Gender		
Male	310	77
Female	90	23
Course		
Engineering	258	64

Management	142	36
Degree		
Computer Science	62	15
Electronics	34	9
Mechanical	62	15
Civil	36	9
Metallurgy	64	16
MBA	32	8
BBA	110	28
Faculty		
Engineering	32	70
Management	14	30

data of the study consisted of both students and faculties from SoE and SoM. These were the target population for collecting the primary data. The total population subject to this study is 462 students and 54 faculties, out of which we considered data for 400 students and 46 professors and rest were discarded for various reasons like not interested in participating or had submitted incomplete information in the questionnaire. Demographic characteristic has been shown in the table 1. We had 258 students' samples from the of SoE and 142 from SoM; and 32 professors for SoE and 14 from SoM. We had lesser female participation compared to male, 90 female vs 310 male students, because there is lesser female students' enrollment in the university.

IV . RESULTS AND ANALYSIS

A. Internship choice during COVID-19

Part II of the questionnaire was designed to choose an option from CBI model, by students, along with the three reasons in the order for choosing the same. It also asks the students to mark their choices and reasons assuming that all the CBI options were available before COVID-19 as well. It helps us understanding shift during COVID-19 vis- a-vis before COVID-19.

Table 2 shows the frequency distribution and percentage for participation in different options of CBI model. With the collected data we infer that COVID-19 forced maximum students, i.e. 48%, to opt for online course based internships instead of physical internships, which would have been 62% under normal scenario without COVID-19 crisis. The rationale behind this seems obvious in the given situation. Had online courses been an option for internship during the normal course of time then, surprisingly, as many as 18 % students would have opted for the same and we see the biggest positive swing, 30 %, for this option during

COVID-19. The reason for it could be convenience and skill development. It is also interesting to observe that students who are opting online courses are maximum from CSE, EEE branches as their technologies and projects can be offered online conveniently over MOOCs and other online platforms, compared to other streams. Whereas the students from core engineering streams are least interested in online courses despite of COVID-19 and lockdown. They are more inclined towards entrepreneurship and startups instead.

Virtual internship as well as entrepreneurship & startups, both stands at second preferred choice with 18% students opted for each one. Students see virtual internship as the best alternate of physical Internship, which is correct to a larger extent. The most interesting finding here is that 18% students opted for the entrepreneurship and startups which is almost double with respect to pre-COVID-19 scenario and it indicates that job crisis and uncertain market conditions is driving students towards entrepreneurship which a good sign for the society and nation.

The only negative swing we observe, which is as maximum as 57 %, is in the case of physical internships. We observe two reasons for this, first, COVID-19 scenario and safety restrictions makes it difficult for the companies to accommodate interns and second, there is huge decline in the paid internships opportunities in the market. In all other options the swing is +ve that indicates building of student's confidence in all the other options during COVID-19 situation. There is not much swing and not many people opting for research and projects as it is

a very specific domain only for the dedicated researchers. COVID-19 doesn't affect this much. Amazingly none of the students wants to work with university internships under normal scenario which can be well understood.

Table 2: Percentage and frequency distribution of students first choice from CBI model

Internship option	With COVID-19		Without COVID-19		Shift(%)
	Frequency	Percentage(%)	Frequency	Percentage(%)	
Physical Internships	20	5	248	62	-57
Virtual Internships	72	18	16	4	14
Online Courses	192	48	72	18	30
Research and Projects	28	7	24	6	1
Entrepreneurship and Startups	72	18	40	10	8
University Offerings	16	4	0	0	4

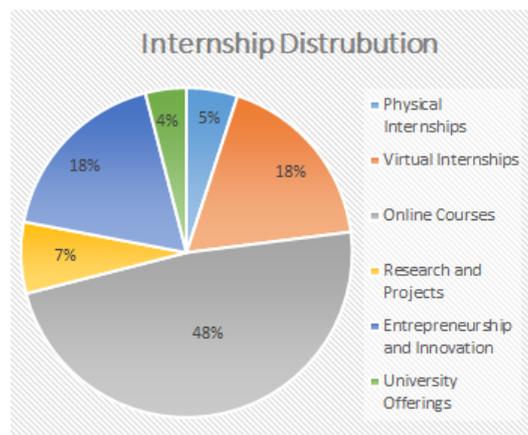


Fig 2: Distribution of Choice Based Internship during COVID-19

We also studied the motives or driving factors behind these choices which has been summed in table 3. C1, C2 C3 are the first three motives for a particular choice and has been assigned weights as 3,2,1. Total weighted scores indicate the extent of contribution of a particular factor in opting for a specific choice for CBI model during COVID-19. On the basis of this we calculated percentile weighted score and drew pareto chart which helps in observing the ranks of different factors in the descending order of impact.

As obvious from the pareto chart in Fig. 4 that biggest decision making factor for an internship choice is “COVID-19 safety and security” with a score of 21%

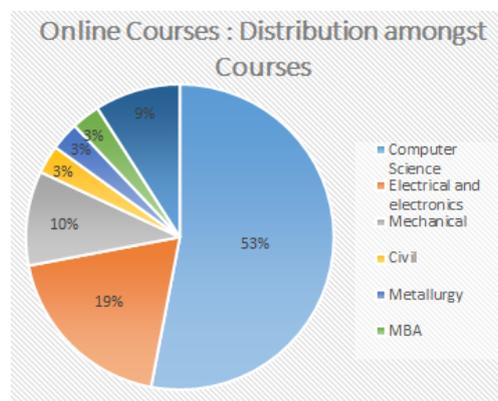


Fig 3: Distribution of online courses among different streams during COVID-19

which is quite obvious looking at the pandemic impact. The second factor that played very important role in choosing an option is convenience which is ranked at 2 with 18%. It's really an interesting finding that many of the students were forced to select an Internet choice as they really didn't find any other suitable option out in the market during this pandemic which is reflected in the survey with a very significant score of 16% with rank 3. As reflected from the Fig 4, these three factors combined together drives more than 50% choices in CBI model during COVID-19. The factors amongst the least significant ones are personality development and industry exposure.

Table 3: Weighted Correlation Matrix between choices and motives

Motives / Choices	Physical Internships			Virtual Internships			Online Courses			Research & Projects			E-ships & Startups			University Offerings			Weighted Score
	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	
COVID-19 Safety	0	0	0	14	18	22	36	43	25	8	6	9	22	18	16	4	3	5	505
Practical Skill development	4	7	4	7	15	14	37	24	34	0	2	2	1	8	6	1	2	1	327
Industry Exposure	9	2	8	17	8	12	8	4	3	0	2	1	0	2	4	0	0	0	166
Career Prospects	1	0	1	6	9	8	8	23	23	4	5	4	16	9	4	1	3	2	248
Convenience	0	0	2	12	4	9	45	43	56	8	8	9	3	4	15	3	3	2	430
Networking	5	8	2	12	12	4	3	0	0	4	3	3	12	8	13	0	0	0	192
Personality Development	1	3	3	4	6	3	2	7	16	0	0	0	14	9	4	0	0	0	139
No suitable option is available	0	0	0	0	0	0	53	48	35	4	2	0	4	14	10	7	5	6	393

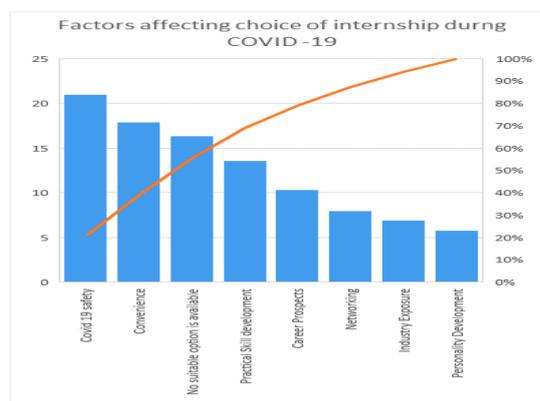


Fig 4: Impact of different factors on choosing internship During COVID-19

An important observation here is that the main objectives of the internships like industry exposure, networking and personality development didn't really matter much during this COVID-19 situation and has been overridden by safety and convenience. This probably could play an important role in future design of the Internship programs and curriculum design as well.

B. Predicted Impact On Learning: Students’ Perspective

This part of the questionnaire tries to figure out the COVID-19 impact on the outcome of Internships from the students point of view. Table 4 displays the aggregated actual score on a bipolar scale. The student has given the actual score as per the descending order from +2 to 0 to -2 (+2: Strongly agree, 2: Agree, 0: Neutral, -1: Disagree, -2: Strongly Disagree). All these learning outcomes have been classified into three buckets of broad categories namely Career

Table 4: Impact on learning: students’ perception

Que No	Questions / Responses	Strongly Agree (+2)	Agree (+1)	Neutral (0)	Dis-agree (-1)	Strongly Disagree (-2)	Weighted Score	Normalized Weighted Score	last year score	Perceived Deviation (%)
1	Will help me in career exploration and clarifying my career goals	23	29	81	135	132	-324	-0.81	0.49	-26
2	It’ll help me in networking for my career journey	18	27	41	135	179	-430	-1.075	0.815	-37.8
3	It’ll help me getting a job in the same organization	12	21	32	89	246	-536	-1.34	0.74	-41.6
4	Will help me learning new things related to my field	175	134	31	34	26	398	0.995	0.595	8
5	Will allow applying class learning into industry	25	45	196	66	68	-107	-0.2675	0.615	-17.65
6	Will help me understanding and identifying the skills needed in the Industry	146	56	88	64	46	192	0.48	0.805	-6.5
7	Will improve my basic computer skills to be more effective and efficient	25	24	166	96	89	-200	-0.5	0.42	-18.4
8	Will improve my communication and interpersonal skill	56	89	145	96	14	77	0.1925	0.3	-2.15
9	Will improve my team working and management skills	23	21	167	102	87	-209	-0.5225	0.465	-19.75
10	It’ll help me to improve my self confidence	18	36	198	86	62	-138	-0.345	0.865	-24.2

Development (questions 1-3), Skill Development (questions 4-6) and Professional Development (questions 7-10).

Earlier research has shown that internship helps students establishing direct contacts and network with industry and corporate professionals [27]. Industry internships helps students getting better jobs sooner [28] because everybody prefer absorbing good interns into jobs [29]. But Fig 5 from our study shows that the lowest score and most negative sentiments, 41.6% compared to last year, of the students during COVID-19 is for question no 3 i.e. “It’ll help me getting a job in the same organization”. The response appears to be obvious due to two reasons, first very less no of students are undergoing physical or virtual internship and second, the market and economic scenario due to COVID-19 is really very difficult and there is dearth of jobs in the market.

Study in Fig 5 suggests that only positive sentiments of the students is for question no 4. It reflects that despite of not getting physical or virtual internships students seem to be pretty confident, approximately 8 % more than the last year, about learning new things of their interests. It's probably because of the availability of time and accessibility of lot of online study materials free of cost during COVID-19

The mean percentage perceived deviation for three buckets of questions namely, Career Development, Skill Development and Professional Development, are 35.1%, 5.4% and 21.5%. This suggests that students are of the view that COVID-19 is likely to affect most their career development prospects and doesn't affect much the skill development and learning. It can also mean that students are more anxious and concerned with the

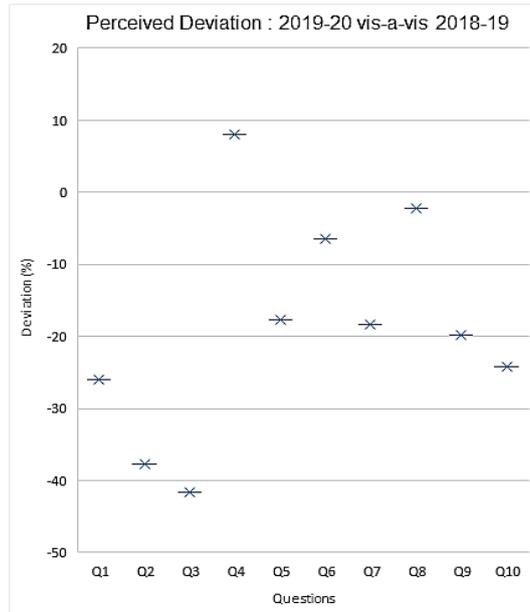


Fig 5: Perceived deviation from last year: students' perception

effect of COVID-19 on their career prospects compared to learning and professional development.

C. Predicted Impact On Learning Outcome: Faculty Perspective

The study also captures the faculty perception regarding impact on learning outcomes, which typically are assessed by mentor professor once the internship is over. Table 5 show score on a bipolar Likert scale ranging from +2 to 0 to -2. The professors have given their view on the predicted impact on learning outcomes of the CBI model and also provide

Table 5: CBI model's impact on LOs: Faculty perception

Learning Outcome(LOs) / Score	Strongly Agree (+2)	Agree (+1)	Neutral (0)	Dis-agree (-1)	Strongly Disagree (-2)	Weighted Score	Normalized Weighted Score (%)
Industry skills and experiential learning	4	11	8	12	11	-21	-9.1
Communication and presentation skills	3	7	8	14	16	-14	-6.1
Maintenance of internship diary or tracker sheet	8	6	21	6	5	6	2.6
team working and management skills	4	8	4	16	14	-35	-15.2
self-confidence and career planning	5	12	8	9	12	12	5.2

rational behind their thinking. Maximum of the faculties are of the view that COVID-19 may not have a huge impact on learning outcome, though it'll affect certain areas more than others.

Faculty have a strong view, with approximately, 15% score, that CBI model during COVID-19 will affect team working and management skills of the students because a virtual, online or WFH internship may not provide them enough opportunities to improve the same. Faculty also opine that though it'll impact industry skills and experiential learning, with -9% score, which is on the similar line as perceived by students because students will learn skills with more sincerity and devotion at home. Interestingly many of the professors have the view that internships during COVID-19 will positively impact students' self-confidence and career planning because the situation forced them to be sincerer towards career and learning. A positive score of 5% in this case is in complete contrast with the students' observations, approximately -41%, captured in career development bucket above. A slight negative score of approximately 6 % indicates that CBI model will not affect much on the communication and presentation skills of the students as students will be learning a lot to communicate and present stuff online. Also it'll help, with small positive score 2.6%, students maintain their internship progress better over online tracker or using internship diary. So overall the survey outcome suggests that CBI model during COVID-19 crisis will not impact much on LOs. It'll slightly affect team working, management and industry skills but at the same time will help improving records and students' self-confidence towards career.

V. CONCLUSION

The research and study in this paper was aimed at introducing the CBI model to carry out the internship program, effectively and efficiently at universities during COVID-19 and to estimate its impact on the core objectives of internship program, from the students and faculty point of view. The study establishes the hypothesis H1 and H2 that COVID-19 has affected the internship opportunities and students' choices of internship during COVID-19. It also confirms the hypothesis H3 and H4 that internships during COVID-19 will have an impact on employability and learning outcomes.

It is observed that overall sentiments for the CBI model, from the faculty point of view, during COVID-19 is at an accepted level with mean percentile score of -4.5%. However, overall sentiments of the students are little more bearish with mean percentile score of -32%. It suggests that faculty members expect the outcome to be satisfactory whereas expected outcome from the students' point of view are not as effective. While the proposed CBI model and results of the findings are interesting but to measure and understand the exact impact of COVID-19 and CBI model, we need to wait till the post internship assessment by schools and surveys of students.

As the COVID-19 sets a new normal for the functioning of the education and universities CBI model could be an alternative model of internship programs in the period of crisis, especially for tier 2, tier 3 universities. This is just the beginning and the model will evolve and get mature with time and a lot needs to be done for making it more effective and efficient in achieving the core objectives of the internship modules in the curriculum.

REFERENCES:

1. Holyoak, L. (2013). Are all internships beneficial learning experiences? An exploratory study. *Education + Training*, 55(6), 573–583. <https://doi.org/10.1108/ET-02-2012-0024>
2. Binder, J. F., T. Baguley, C. Crook, and F. Miller. 2014. "The Academic Value of Internships: Benefits across Disciplines and Student Backgrounds." *Contemporary Educational Psychology* 41: 73–82
3. McHugh, P. (2017), "The impact of compensation, supervision and work design on internship efficacy: Implications for educators, employers and prospective interns", *Journal of Education and Work*, 30(4), 367-382.
4. Silva, P., Lopes, B., Costa, M., Melo, A. I., Dias, G. P., Brito, E., & Seabra, D. (2018). The million-dollar question: Can internships boost employment? *Studies in Higher Education*, 43(1), 2–21.
5. Galloway, L., Marks, A., & Chillias, S. (2014). The use of internships to foster employability, enterprise and entrepreneurship in the IT sector. *Journal of Small Business and Enterprise Development*, 21(4), 653–667. <https://doi.org/10.1108/JSBED-09-2014-0150>
6. Barnett, R. (2000). Super complexity and the Curriculum, *Studies in Higher Education* Volume 25, No. 3.
7. Brenda, L. and ESECT colleagues, (2005). *Employability and work-based learning*, The Higher Education Academy, Innovation Way, United Kingdom
8. Boud, D. and Solomon, N. (2001) *Work-Based Learning: A New Higher Education*. Buckingham: SRHE and The Open University Press.

9. Maertz, C. P., Stoeberl, P. A. & Marks, J. (2014), "Building successful internships: lessons from the research for interns, schools, and employers", *Career Development International*, Vol. 19 Iss 1 pp. 123 – 142
10. Cook, S. J., Parker, R. S., and C. E. Pettijohn, "The Perceptions of Interns: A Longitudinal Case Study," *Journal of Education for Business*, Vol. 79(3) 2004, 179.
11. Gault, J., Redington, J, and Schlager, T., (2000) "Undergraduate Business Internships And Career Success: Are They Related?," *Journal of Marketing Education*, Vol. 22(1), 45.
12. Matthew T. Hora, Emily Parrott & Pa Her, "How do students conceptualise the collegeinternship experience? Towards a student-centred approach to designing and implementing internships" *Journal Of Education And Work*, 2019
13. Bonwell, C. C., &Eison, J. A. (1991). *Active Learning: Creating Excitement in the Classroom*. ASHE-ERIC Higher Education Report, Washington DC: School of Education and Human Development, George Washington University.
14. Young, Wright & Stein, 2006 " Putting It All Together: Meaningful Outcomes Of Workplace Experiences For Marketing Students", *Marketing Management Association 2006 Educators' Conference Proceedings*, p131
15. Harvey, L., Moon, S. and Geall, V. with Bower, R. (1997) *Graduates' work: organizational change and students' attributes*. Birmingham: Centre for Research into Quality, University of Central England, Birmingham and The Association of Graduate Recruiters.
16. Johnson, S. and Burden, T. (2003) *Young people, employability and the induction process*. York: Joseph Rowntree Foundation
17. Knemeyer AM, Murphy PR (2002) *Logistics internships: employer and student perspectives*. *Int J PhysDistribLogistManag* 32(2):135–152
18. Knouse SB, Fontenot G (2008) *Benefits of the business college internship: a research review*. *J Employ Couns* 45(2):61–66
19. Matusovich, H., Carrico, C., Harris, A., Sheppard, S., Brunhaver, S., Streveler, R., &McGlothlin Lester, M. B. (2019). *Internships and engineering: beliefs and behaviors of academics*. *Education, Training*
20. Coco, M. (2000). "Internships: a try before you buy arrangement". *SAM Advanced Management*
21. Sides, N.H. and Mrvica, A. (2007), *Internships: Theory and Practice*, Baywood, Amityville, NY.
22. Coco, M. (2000). "Internships: a try before you buy arrangement". *SAM Advanced Management*
23. Perlin, R. 2011. *Intern Nation: How to Earn Nothing and Learn Little in the Brave New Economy*. Brooklyn, NY: Verso
24. Sides, N.H. and Mrvica, A. (2007), *Internships: Theory and Practice*, Baywood, Amityville, NY.
25. Knouse SB, Fontenot G (2008) *Benefits of the business college internship: a research review*. *J Employ Couns* 45(2):61–66
26. Gashaw, Z.,(2019). *Challenges facing internship programme for engineering students as a learning experience: a case study of DebreBerhan University in Ethiopia*. *IOSR Journal of Mechanical and Civil Engineering (IOSRJMCE)*, 16 (1), 12-28.
27. Schambach TP, Driks J (2002) *Student perceptions of internship experiences*. In: Paper presented at the 17th annual conferences of the International Academy for Information Management, Barcelona, Spain
28. Knouse SB, Fontenot G (2008) *Benefits of the business college internship: a research review*. *J Employ Couns* 45(2):61–66
29. Gault J, Leach E, Duey M (2010) *Effects of business internships on job marketability: the employers' perspective*. *Educ Train* 52(1):76–88