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## **MESSAGE FROM THE DESK OF EDITOR IN CHIEF**

The Chief Editor and Editors of the research journals of Management, Engineering, Law, and Education streams i.e. IUT Journal of Research and Development (JARD) would take it as their duty to express the deep gratitude to the contributors and readers of current volume.

We feel proud to bring sixth issue of the online IUT Journal of Advance Research and Development. We believe that, economic growth should translate into the happiness and progress of all. Along with it, there should be development of art and culture, literature and education, science and technology. We have to see how to harness the various resources of the nation for achieving common good and for inclusive growth. Keeping in tune with this noble idea, the sixth issue of IUT-JARD has addressed several contemporary issues covering diversified field including environment, corporate crime, health, education, empowerment of tribal women, technology and innovation.

This issue needs an integrative and a holistic approach to the solution. Finally, information contains in this journal has been published by the IUT obtains by its authors from various sources believed to be reliable and correct to the best of their knowledge, and publisher is not responsible for any kind of plagiarism and opinion related issues.

Dr. Dhananjoy Datta  
**(Chief Editor)**

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## Effects of Corporate Social Responsibility to Employee Commitment on Spi – Global

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### **Abstract**

Corporate Social Responsibility is a continuing commitment of a business in molding its image to the community. Developing CSR programs influences the company and the employees in a way that they value one another. This study intended to determine the effect of conducting CSR programs to employee commitment in terms of affective, continuance, and normative. This study also aimed to determine if the level of commitment of employees had significant differences when grouped according to profile variable such as age, sex, civil status, educational attainment, length of service, and position. To meet the purpose, descriptive method was utilized and self-constructed questionnaire was distributed to 267 employees of SPi-Global that conduct CSR programs voluntarily. SPi-Global is one of the largest and most diversified Business Process Outsourcing (BPO) service providers in terms of clients and geographic presence and a global private markets investment management firm that is fully owned by Partners Group that delivers technology-driven solutions to multiple industry segments including financial and business information, risk and compliance. Data were analyzed with frequency, mean, t-test, and ANOVA. Result showed that majority of the employees were 20 – 24, female, single, college graduate, serving for almost three years, and serving rank -and -file positions. In terms of the effect to level of commitment, affective and normative was verbally interpreted as high, while continuance was average. Moreover, the level of affective commitment with computed p-values of 0.045 and 0.031 was found to be significant when grouped according to the length of service and position, respectively. With this, implications and recommendations were prepared to uphold standards, value obligations and responsibilities of both employees and management in order to facilitate CSR programs.

**Keywords:** Affective commitment, Continuance commitment, Corporate social responsibility, Employee commitment, Normative commitment

## **Introduction**

The Corporate Social Responsibility (CSR) is one of the hotly debated topics in today's highly competitive business world. The concept has long evolved from being merely a "nice but optional" activity to virtually mandatory for many companies, and as such, these companies nowadays exercise increased willingness to act responsible towards key social issues. As businesses spend time and money in establishing their projects and programs to attain profit, they still have to find ways to introduce another view of molding its image to the people through CSR. Corporations are using CSR to strengthen its relationships with different stakeholders including customers, investors, government, suppliers, and employees. These strengthened relationships ensure corporations minimum conflicts with stakeholders and maximum loyalty from all stakeholders. In displaying that they are socially responsible, firms show interest in social issues, politics and community welfare and most importantly the general happiness of their employees [1].

Moreover, employees are one of the greatest assets of the organizations. They are the one who will think, act, be satisfied and be committed to every activity the company is doing. Commitment of employees varies depending on how they understand the activity. Three component of organizational commitment has been featured prominently in organizational commitment literature. Meyer and Allen identify them as affective, normative and continuance commitments. In its earliest and simplest explanation O'Reilly [2] defined organizational commitment as a psychological bond, which an individual employee has with the organization. This may include an employee's loyalty to the organization, readiness to adopt values and goals of the organizational; fulfilment of his/her job responsibilities, among other. Affective commitment refers to an employee's attachment to, identification with and involvement in the organization. It encompasses the emotional ties, which an individual develops in relation to the organization primarily as a result of positive work experiences. Normative commitment has also been explained as the feeling of obligation to continue to work for the organization. This is premised on building a sense of duty and value, and the degree to which an individual feels obligated to stays in an organization. Lastly, as explained by continuance commitment accrues from a perceived cost (both economic and social)

associated with leaving the organization. These components of commitment have been described largely to be the predictors of employee behaviour and intentions at the organizational level [3].

In an attempt to explain the relationship between CSR and commitment, [4] premised this relationship on social exchange. In their view, the reactions of employees to CSR initiatives are largely governed by reciprocity and generally described as a pattern of mutually contingent exchange of gratifications. Within an organization, employees under the circumstance of CSR feel obligated to reciprocate the positive treatment given to them by the organization. On the other hand, a dissatisfied employee, who feel unfairly underpaid, is more likely to show noncommittal to the achievement of the organization's goals.

Majority of research on corporate social responsibility roams around financial performance, consumer behavior and its effects on environment. However, little research so far has focused on employee's perceptions towards CSR and its influence on their organizational commitment. Studies suggested that corporate social responsibility increases employee commitment level with the organization, because CSR interventions also included activities for the welfare of employees and their families. Studies have confirmed positive effects of employee commitment on organizational performance. Committed employees are considered as critical success factor for any organization. To develop sound relationships with employees, organizations can use CSR as a strategic tool. Corporate CSR is being utilized by leading organization to establish good association not only with external stakeholders but also internal stakeholders as well for example employees. This study addresses this gap by analyzing the influence of corporate social responsibility on employee commitment.

The focus of this paper is on employee as stakeholders in firm's activities. Employees' role in CSR span from pushing corporations to adopt socially responsible behaviour; designing and implement effective CSR programmes and policies among others. It is ironic to note that notwithstanding the major role employees play in planning and implementation of firm's CSR engagement, less attention is given to those CSR that related to them. Since businesses create their corporate social responsibility to the highest of point of view, the researchers became eager as to how employees are committed to the organization's projects. Thus, with the goal of generating insights on the effect of corporate social responsibility to the employees commitment, there arises a need for an investigation since the findings that may be



derived from the study will help the management to better understand how corporate social responsibility affects the employees and to what extent this labor is committed to such activity.

The study assessed the effect of Corporate Social Responsibility to the commitment of employees in SPi Global. Specifically, the study was carried out to determine the profile of the respondents in terms of age, sex, civil status, educational attainment, length of service, and position; to know how do the CSR programs affects the level of employees commitment with regards to affective, continuance, and normative; and to ascertain if there is a significant differences in the effect of the level of commitment when grouped according to profile variables.

## **Methodology**

The descriptive design was utilized to answer the objectives of the study. The study focused on the effect of corporate social responsibility to the employee commitment on SPi Global. The company, SPi- Global was chosen by the researcher as their respondent in the study, because they conduct their CSR voluntarily every year, they value CSR because it is their way of giving back and last, they are a company which builds a corporate community partnership programs strategically aligned with their key businesses. The researcher got the total population of 800 employees from a simple interview with the HR manager of SPi- Global. Since the company has a diverse number of employees, the researcher used the Slovincs formula to get the sample size of the respondents. The researcher came up with a total of 267 respondents. The employees were consisting of different positions, such as rank and file, middle management, top management, contractual base, team leader and member, maintenance, project base, encoder, image processing and production staff. Their works are in line with the nature of work of the company, which is Business Process Outsourcing. In this study, non-probability sampling was used. In this technique, it does not afford any basis that each item in the population has of being included in the sample. In a specific sense, the researcher used one of the types of non probability sampling, which is convenience sampling. In this type of sampling, subjects were selected for the study by the convenience of their availability to the researcher

In order to determine the effect of corporate social responsibility to the employee commitment of SPi Global, the researcher used a self constructed questionnaire. The

questionnaire served as the major data gathering instrument in the study. It combined a sets of questions prepared to answer the problem in the study. The questionnaire was composed of two parts, the first part is about the profile of the respondents. It includes the age, gender, civil status, educational attainment, length of service, and position in the company. The second part is about the criteria of corporate social responsibility influencing the levels of employee commitment in SPi- Global. These levels of commitment include affective, continuance, and normative commitment. The study used the Likert scale method, using the code number of 1-5, where one is the lowest, while five is the highest; it has a verbal interpretation of very low, low, average, high and very high. This was used in order to interpret and compute the weighted mean and composite mean of the commitment of the employees to the corporate social responsibility of the organization. The researcher also conducted their dry run process to determine the reliability and validity of the questionnaires. The researcher conducted the said dry run at Littelfuse, Lima Park, Malvar, Batangas with a total of 30 respondents. The result of the dry run showed a Cronbach's alpha of 0.939, which indicated a passing result. From the dry run procedures, the researcher developed the actual survey. The actual survey was done during the break time of employees at the canteen of SPi- GLOBAL. It was an alternating break time, and a consolidation of different position of employees from top to bottom. This survey sustained the information needed to formulate the tables for result.

The data gathered through the use of questionnaire were tallied, analyzed, and interpreted using the statistical tool which is considered as the most suitable measures for the study:

**Percentage.** This is the statistical tool that the researcher used in the study to determine the demographic profile of the respondents. It was used to find out the distribution of the respondents according to the profile which are the age, sex, civil status, length of service, educational attainment and position in the company.

**Weighted Mean.** This method was used to test the level of commitment of the respondents.

**T-test (Independent).** This was used to determine the significant difference on the effect of commitment with respect to respondents' sex.

**One-way Analysis of Variance (ANOVA).** This was used to determine the significant difference on the effect of commitment with respect to respondents' age, civil status, educational attainment, length of service, and position.

## Results and Discussion

For the purpose of determining the demographic profile of the respondents, the researcher presented the frequency distribution of the employees who participated on the research.

**Table 1**  
**Distribution of the Respondents in terms of Age**

Age	Frequency	Percent
Below 20	2	1
20 – 24	89	33
25 – 29	72	27
30 – 34	68	26
35 – 39	25	9
40 – 44	8	3
45 and over	3	1
<b>Total</b>	<b>267</b>	<b>100</b>

**Table 2**  
**Distribution of the Respondents in terms of Sex**

Sex	Frequency	Percent
Male	125	47
Female	142	53
<b>Total</b>	<b>267</b>	<b>100</b>

**Table 3**  
**Distribution of the Respondents in terms of Civil Status**

Civil Status	Frequency	Percent
Single	184	69
Married	81	30
Widow/widower	2	1
Separated	0	0
<b>Total</b>	<b>267</b>	<b>100</b>

**Table 4**  
**Distribution of the Respondents in terms of Educational Attainment**

Educational Attainment	Frequency	Percent
High School Graduate	4	1
College Undergraduate	10	4
College Graduate	250	94
Others	3	1
<b>Total</b>	<b>267</b>	<b>100</b>

**Table 5**  
**Distribution of the Respondents in terms Length of Service**

Length of Service	Frequency	Percent
3 years and below	120	45
4 - 6 years	60	22
7 - 9 years	29	11
10 years and above	58	22
<b>Total</b>	<b>267</b>	<b>100</b>

**Table 6**  
**Distribution of the Respondents in terms Position**

Position	Frequency	Percent
Rank and File	154	58
Middle Management	65	24
Top Management	3	1
Others	45	17
<b>Total</b>	<b>267</b>	<b>100</b>

**Table 7**  
**Effects of Corporate Social Responsibility on the Level of Employee Commitment in terms of Affective Commitment**

Items	WM	VI
1. I feel strong sense of belongingness while conducting CSR program in this organization.	3.91	High
2. I am happy to be voluntarily involved in any CSR programs of this organization.	4.02	High
3. I enjoy discussing the CSR programs of my organization outside.	3.79	High
4. I am happy to be part of any CSR program of this organization.	3.98	High
5. I feel that the problems of this organization in terms of CSR programs are my own problems as well.	3.57	High
6. I enjoy every CSR activity and program of this organization.	3.86	High
7. I do not think that I could be attached to another organization as I am to this one, because this organization has the best of its CSR Programs.	3.37	Average
8. I am emotionally attached to this organization when it comes to CSR programs.	3.47	Average
9. I feel like I am” part of the family” during and after conducting CSR programs of this organization.	3.73	High
10. I am proud to act as an employee with people in the community with the best quality effort from our CSR programs.	3.79	High
<b>Composite Mean</b>	<b>3.75</b>	<b>High</b>

It can be viewed from the table the effects of corporate social responsibility to the level of employees’ commitment in terms of affective commitment, whereas there is a composite mean

of 3.75 corresponding to a high verbal interpretation. For the first rate for affective commitment, the employees at SPi- Global are happy to be voluntarily involved to any CSR programs, happy to be part of any CSR program and have a strong sense of belongingness while conducting CSR programs of the company. These items got the highest weighted mean of 4.02, 3.98 and 3.91 respectively. Least from the assessment of the employees is the item, when they do not think that they could be attached to other organization like this one, because of CSR programs, with an average commitment corresponding to a composite mean of 3.37.

**Table 8**  
**Effects of Corporate Social Responsibility on the Level of Employee Commitment in terms of Continuance Commitment**

Items	WM	VI
1. It would be too costly for me to leave the organization, because I am part of its CSR programs.	3	Average
2. It would be hard for me to leave the organization now because of the CSR Programs, even if I want to.	3.02	Average
3. I stay because of the overall benefits and the CSR programs the organization offers.	3.15	Average
4. I should continue working in the organization so that I can also continue helping others.	3.45	Average
5. I am afraid of what might happen if I decided to leave my job without having another one lined up.	3.41	Average
6. Right now, staying in this organization is a matter of necessity and a giving back.	3.51	High
7. I feel that I have few options to consider leaving this organization; one is specifically its CSR programs.	3.3	Average
8. The serious consequences of leaving the organization would be the insufficiency of available alternatives and the CSR programs that this organization has been conducting for the environment and stakeholders.	3.24	Average
9. One of the major reasons I continue to work for this organization is that leaving would require personal experience- another organization would not match the overall benefits and CSR program relationships I have here.	3.18	Average
10. My social life would be disrupted, if I leave this organization, as most of my colleagues who participate in corporate social responsibility are here.	3.05	Average
<b>Composite Mean</b>	<b>3.23</b>	<b>Average</b>

It can be viewed from the table above that the effect of corporate social responsibility to the level of employees' commitment when it comes to normative commitment having a composite mean of 3.23 has a verbal interpretation of Average. It can also be seen that

employees have a high commitment in the item staying on the organization is a matter of necessity and giving back, with a composite mean of 3.51. On the other hand, employees have an average commitment with a weighted mean of 3.45 and 3.41 respectively on the items, they should continue working the organization so that they also continue helping others and they are afraid of what might happen if they decide to leave the job without having another one line up. Least from the assessment can be seen on the item, it will be too costly for them to leave the organization, with a corresponding weighted mean of 3.0.

Based on the observation of the researcher, the employees had an average variance when it comes to continuance commitment. The employees estimate the benefits, cost and consequences they have to incur when leaving the organization. Therefore, in order to retain employees who are continuance committed; the organization needs to give more attention and recognition to those elements that boost the employee's morale to be affectively committed.

**Table 9**  
**Effects of Corporate Social Responsibility on the Level of Employee Commitment in terms of Normative Commitment**

<b>Items</b>	<b>WM</b>	<b>VI</b>
1. I learn to believe the value of loyalty and giving back to this organization where I belong.	3.78	High
2. I feel a sense of moral obligation to stay here.	3.55	High
3. I think people these days move from organization to organization too often, because of the lack of growth and experience they need and acquire in some programs of the organization, like CSR.	3.54	High
4. I believe that person should be loyal and respectful to higher organization when it comes to CSR programs proposal.	3.74	High
5. I should be responsible in upholding the standards and ideas in this organization, especially in terms of CSR programs.	3.68	High
6. Jumping from other organizations seems unethical to me, because I should also consider the fact that this company taught me of giving back to others.	3.25	Average
7. I think that being employed in a company with corporate social responsibility is more reasonable.	3.74	High
8. Things were better in these days if people stayed in the organization and participate in the CSR programs/ projects of the company for the rest of their careers.	3.6	High
9. I would accept almost any type of job	3.35	Average

assignment and CSR programs in order to keep working for this organization.		
10. I should repay the benefits that I have received in this organization, by voluntarily participating in any CSR programs of the organization.	3.58	High
<b>Composite Mean</b>	<b>3.58</b>	<b>High</b>

It can be viewed from the table 4.2.3 that the effect of corporate social responsibility to the level of employees' commitment when it comes to normative commitment has a composite mean of 3.58 which has a verbal interpretation of High. It can also be seen that most of the items has a high scale of commitment with a corresponding weighted mean from 3.54- 3.78, summarizing the obligation responsibility, loyalty and ethics that the employees are valuing as an attachment of themselves to the organization. Least from the employees' assessment was the item saying that, jumping from one organization seems unethical, because they also consider what the company had taught to them by giving back to others, with a composite mean of 3.25.

**Table 10**  
**Significant Difference among the Respondent's level of commitment in terms of Age**

<b>Level of Commitment</b>	<b>p-values</b>	<b>Computed f-values</b>	<b>Decision (Ho)</b>	<b>Verbal Interpretation</b>
<b>Affective</b>	0.436	0.985	Accept Ho	Not Significant
<b>Continuance</b>	0.131	1.660	Accept Ho	Not Significant
<b>Normative</b>	0.553	0.823	Accept Ho	Not Significant

The table above presents the difference on the respondents' level of commitment when group according to age. Since all of the p-values are higher than 0.05 level of significance, then the null hypothesis is accepted. This indicated that there is no significant difference on the level of effect of commitment when grouped according to age. Age does not affect the level of commitment of the employees. Employees' age has not been a basis of commitment because being committed to the organization is based on the satisfactions and development they had received. Individuals of all ages are more committed to their firm if they feel satisfied that their needs for ongoing development are being met, although the early career-stage employees are more likely to be willing to leave their company if dissatisfied with development opportunities [5].

**Table 11**  
**Significant Difference among the Respondent's level of commitment in terms of Sex**

Level of Commitment	p-values	Computed t-values	Decision (Ho)	Verbal Interpretation
Affective	0.504	0.670	Accept Ho	Not Significant
Continuance	0.069	1.825	Accept Ho	Not Significant
Normative	0.693	0.395	Accept Ho	Not Significant

The table above presents the difference on the respondents' level of commitment when group according to gender. Since all of the p-values of .504, .069 and .693, are higher than 0.05 level of significance, then the null hypothesis is accepted. This indicates that there is no significant difference on the level of commitment when grouped according to their gender. The sex of the employees, whether male or female, does not matter with the level of commitment they had in the organization. The employee's voluntary participation in CSR programs, is a choice of having committed to the company. It determines that being committed is a matter of equality. In a study of the organizational commitment of nurses, the employee's perception of alternative employment opportunities was negatively related to organizational commitment. If males perceive that they have more employment opportunities than females, the fact that females are more committed than males is at least tenable [6].

**Table 12**  
**Significant Difference among the Respondent's level of commitment in terms of Civil Status**

Level of Commitment	p-values	Computed f-values	Decision (Ho)	Verbal Interpretation
Affective	0.760	0.274	Accept Ho	Not Significant
Continuance	0.748	0.291	Accept Ho	Not Significant
Normative	0.890	0.117	Accept Ho	Not Significant

Table 4.3.3 presents the difference on the respondents' level of commitment when group according to civil status. Since all of the p-values are higher than 0.05 level of significance, that is .760, .748 and .890, are found to be not significant. These therefore represents that there is no significant difference on the level of commitment when grouped according to employees civil status. The reason why they do not differ from their commitment in terms of the variables affective, continuance and normative, is that employees have the same perception in these commitments whether they are married, single or widow. The variable civil status does not affect commitment because any person who has



independence and wants can be committed generously to the company.

**Table 13**  
**Significant Difference among the Respondent's level of commitment in terms of Educational Attainment**

Level of Commitment	p-values	Computed f-values	Decision (Ho)	Verbal Interpretation
Affective	0.919	0.166	Accept Ho	Not Significant
Continuance	0.265	1.331	Accept Ho	Not Significant
Normative	0.104	2.075	Accept Ho	Not Significant

Table presents the difference on the respondents' level of commitment when group according to civil status. Since all of the p-values are higher than 0.05 level of significance, that is .919, .265 and .104 respectively, are found to be not significant. These therefore represents that there is no significant difference on the level of commitment when grouped according to employees educational attainment. In terms level of commitment, consideration of educational attainment does not matter. Educational attainment does not a basis of commitment, it is only one of the variable that catches attention when it comes to position. The more educated an individual is, the more possibility that an employee can get into higher position.

In contrast, education can spell less commitment to work, because of greater opportunities to find fulfillment outside the work role. It may be caused by higher expectations leading to feelings of frustration and non-fulfillment of outside the work role. On the other hand, education has been found to be inversely related to organizational commitment. This also indicates that more educated people may often have higher expectation which organizations may be unable to meet [7].

**Table 14**  
**Significant Difference among the Respondent's level of commitment in terms of Length of Service**

Level of Commitment	p-values	Computed f-values	Decision (Ho)	Verbal Interpretation
Affective	0.045	2.715	Reject Ho	Significant
Continuance	0.068	2.409	Accept Ho	Not Significant
Normative	0.487	0.815	Accept Ho	Not Significant

Table presents the difference on the respondents' level of commitment when grouped according to the length of service of employees. The level of affective commitment with a

computed p-value of 0.045 is found to be significant at 0.05 level of significance. This indicates significant difference on the effect of affective commitment of the respondents when grouped according to their length of service. Length of service affects the commitment of employees in terms of affective. The longer term of service may actually imply higher commitment. On the other hand, an employee is affectively committed because he already develops a socialization with the co workers.

The length of service may influence the degree of employees' commitment to the organization. This degree has been connected with the extent to which certain employees have been satisfied by the organization. The strength of the industry as cited can affect the strength of the commitment of the members. The process of creating a stable and committed labor force for a young business takes time to consolidate, so that new recruits were able to adjust and would not leave the organization and tend to stay for a long years [8].

**Table 15**  
**Significant Difference among the Respondent's level of commitment in terms of Position**

<b>Level of Commitment</b>	<b>p-values</b>	<b>Computed f-values</b>	<b>Decision (Ho)</b>	<b>Verbal Interpretation</b>
<b>Affective</b>	0.031	3.005	Reject Ho	Significant
<b>Continuance</b>	0.745	0.412	Accept Ho	Not Significant
<b>Normative</b>	0.088	2.203	Accept Ho	Not Significant

Table presents the difference on the respondents' level of commitment when group according to their position in the company. The effect of commitment with regard to the affective has computed p-value of 0.031 and is found to be significant at 0.05 level of significance. This could mean that there is a significant difference on the effect of commitment in terms of affective commitment of the respondents. The position of employee affects their commitment to the company. The position states the loyalty and commitment of employees to the organizations philosophy and objectives. Position affectively attached to the organization, because of the development and growth that an employee had gained in the company.

Employees receive high support from the organization and supervisor. They yielded high organizational commitment and have turnover intent. Significant relationships exist between organizational and supervisory support with organizational commitment and turnover intent [9].

## Conclusions and Recommendations

1. The researcher found out that majority of the respondents are at the age bracket of 20-24, female, single, college graduate, serving the company for almost three years and are rank and file.

2. The researcher found out that the effect of CSR programs on affective and normative commitment are high; while on continuance commitment is average.

3. The researcher concluded that there is no significant difference between the employees' commitment when grouped according to age, sex, civil status, and highest educational attainment and when grouped according to length of service and position, there is a significant difference between the employees commitment in terms of affective.

In the light of findings and conclusions arrived at this study, the researcher came up with the following recommendations:

1. Though the findings state that there were high variances in terms of affective and normative commitment, the management should provide a more precise orientation of the employees regarding the corporate social responsibility of the company and how it is important to every stakeholder and to their development. Also, this would be a way on how management could control and balance the level of commitment that their employees possess.

2. They should provide more benefits or better promotions and rewards in order to lessen the idea of the employees to leave the organization.

3. This study can be used by the management to determine and improve more the moral obligation and responsibility of the employees inside and outside, for higher commitment and productivity.

4. Similar studies should be conducted to update and validate further findings and recommendations for this study.

## References

1. McGuire, J. W. (2013). *Business and society*. New York, NY: McGraw-Hill.
2. Slack, F. J., Orife, J. N., & Anderson, F. P. (2010). Effects of commitment to corporate vision on employee satisfaction with their organization: An empirical study in the United States. *International Journal of Management*, 27, 421–436.
3. Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2012). Affective, continuance, and normative commitment to the organization: A meta-analysis of

antecedents, correlates, and consequences. *Journal of Vocational Behavior*, 61, 20–52. doi:10.1006/jvbe.2001.1842.

4. Gond, J. P., El-Akreimi, A., Igalens, J., & Swaen, V. (2010). *Corporate social responsibility influence on employees* (Research Paper Series). International Centre for Corporate Social Responsibility. Nottingham University, Nottingham.
5. Colbert, Amy E. & Kwon, Ik-Whan G. (2000). Factors related to the organizational commitment of college and university auditors. *Journal of Managerial Issues*, 484-501.
6. Finegold, D., Mohrman, S. & Spreitzer, G. (2002). Age effects on the predictors of technical workers commitment and willingness to turnover. *Journal of Organizational Behavior*, 655-674.
7. Kahtani Al, Nasser S. (2012). A Study of Relationship between Demographical Variables, Organizational Structure and Social Interaction with Organizational Commitment among Employees of Saudi Arabia. *International Journal of Trade and Commerce*, 1(1), 11-22.
8. Sharma, N., Young, L. & Wilkinson, I. (2006). The commitment mix: Dimensions of commitment in international trading relationships in India. *Journal of International Marketing*, 14(3), 64-91.
9. Van Dyre & Ang (2000). Predicting Commitment to Profile of Respondents. *Hong Kong Survey*, 6(1), 41-46.

## 'Grow Sack Plants' is a Noble Cultivation Practice in Climate Change Situation

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### Abstract

Densely populated and agriculture-dependent Bangladesh has been facing serious climate change disasters like flood, water-logging, droughts etc. every year in the recent decades. As a result, the agriculture, especially the food production has been badly affected. Considering the increasing frequencies of climate change disasters, this study was conducted to find out sustainable methods to cope up the crop production, especially for vegetables, spices and fruit. This project established a Climate Smart Agriculture (CSA) for the national interest especially for the areas with adverse environmental condition as well as urban and peri-urban areas. A pilot project was developed in International University of Business Agriculture and Technology (IUBAT) campus, Bangladesh. Different types of sacks: Hessian bags, jute, polythene; earthen and plastic pots and containers were used for growing plants. For hanging sack plants, bamboo, wooden and polyvinyl posts and racks were erected. Crops were selected according to their growing habitat and season. Selected species were: Tomato (*Lycopersicon esculentum* Mill.), Yard Long Bean (*Vigna unguiculata* L.), Chili (*Capsicum annum* L.), Eggplant (*Solanum melongena* L.), Bitter Gourd (*Momordica charantia* L.), Mint (*Mentha piperita* L.), Country Bean (*Lablab purpureous* L.), Lady's Finger (*Abelmoschus esculentus* (L.) Moench), Spinach (*Basella alba* L.) and Sweet and Lemon Basil (*Ocimum basilicum* L.). Soil and compost were collected and sacks were filled as per the recommended proportion. Soil and plant parts analysis were done to ensure maximum production and to maintain optimum soil nutrient status. Grey water was used as per requirement. Organic pest control methods were applied against pests and diseases. Routine

observation and management were done for recording data. Students of the College of Agricultural Sciences of IUBAT were engaged to complete their practicum for graduation. A luxuriant growth was observed and yield was similar to conventional cultivation practice of all the crops. This cultivation practice is organic and environment friendly, ensures biomass and grey water recycling. Undergraduate students also built up their capacity through this project. The findings of the project provide fresh and green edible plants/crops to prevent malnutrition and to supplement food and nutrient security. This practice will build up capacity in the family level and thus ensures human resource development. It will promote international and regional collaboration with scientific and civil societies, as well.

**Keywords:** Grow Sack Plants, Climate Smart Agriculture, Grey water, Cow-dung Slurry

## **Introduction**

In South Asia, Bangladesh is the most densely populated delta of the Ganges-Brahmaputra-Meghna (GBM) basin. Most of the country is the flood-plain of the GBM river systems with their tributaries and distributaries. The fertile alluvial flood-plain is characterized by gently undulated landscape with hills and hillocks in the north, east; a central undulated red soil terrace, the Madhupur Tract, and a huge coastal zone with highly fertile land, rivers, estuaries, mangroves, seashore and islands adjacent to the land-water interface of southern part of the country. Although Bangladesh is the most vulnerable to frequent disasters with floods, cyclones and droughts yet historically the people have adapted to these, making their homes and homesteads following disaster resilient traditional practices to protect them from floods, tornadoes and erosion etc.; climatic-season-based cropping, fish-farming and major transportation by boat, traditional flood plain management, and natural and artificial defense mechanism etc. However, over the last few decades, along with the increased frequencies of climate change disasters, increasing urbanization, unplanned road construction, industrialization and population growth, many aspects of traditional life have been changing very fast.

Bangladesh is recognized globally as the most vulnerable to Climate Change extremes. About 80% of the country is deltaic floodplain of the GBM and many rivers flowing from the central India, Himalayas, China, Assam, Lusai and Arakan-Burmese ranges; the catchments of the GBM Rivers flowing to the Bay of Bengal through the estuaries. Bangladesh is the most vulnerable country in the world to tropical cyclones and the sixth most vulnerable to

floods. Millions of people are being directly affected by frequent climate extremes and millions of lives and livelihoods are threatened by frequent weather-related disasters. Low-lying lands, coastline areas and floodplains of most part of the country are highly exposed to both disasters and sea level rise especially in the coastal zones (Rahman and Rahman 2015).

However, after the 1960's Green Revolution, these wetlands were also destroyed by earth-filling for agricultural expansion especially for HYV IRRI. Thus, the natural systems including forests, wet-bodies and traditionally managed floodplains and coastal ecosystem have been destroyed and the country is facing serious climate change disasters and affecting millions every year. As a result, the cropping has become most un-predictive in the variable climatic conditions. Therefore, growing suitable crop especially food crops under climate change situation especially in adverse climatic condition is very difficult.

Moreover, due to the paucity of post-harvest storage and transportation facilities food adulteration, in the name of preservation, has become a common practice that resulted serious crisis of fresh vegetables and fruits in the cities. Thus, it is important to grow some crops especially the vegetables, spices and fruits under special condition in the bags and pots as climate-smart crops mainly in the homesteads, kitchen garden and balconies, are essential to meet up the day to day demand of fresh and emergency supply.

Moreover, in the mechanized world, growing some crops thyself gives immense pleasure and it also ensures short-cycle biomass recycling, grey water use and all members participation of the family in this climate-smart cropping culture in the proposed project 'Grow Sack Plants' is a Noble Cultivation Practice in Climate Change Situation. In adverse condition like floods and water logged situation, this method is highly effective ensuring the desired crop production.

Being inspired by the Rotary International, England, in 2012, a small scale experimental project had been conducted in IUBAT campus using university resource and encouraging results were observed. Related work already performed or in progress in the UK, Kenya and South Africa (Acton 2011).

## **Scientific Scope of the Project**

### **A. Research Objectives:**

1. To grow vegetables, fruits and spices under adverse condition
2. To utilize homestead, balconies, kitchen yard with hanging and other sacks plants



3. To recycle short cycled biomass and grey water.
4. To supplement home grown fresh edible crops
5. To ensure all members' participation in cropping culture
6. To reuse the resources namely bags, ropes, posts and soil etc.

### **B. Relationship of These Objectives to the Present State of Knowledge in the Field**

Growing plants in sacks is already under practice in different forms and practices like roof top gardening, kitchen yard, balconies. In IUBAT campus, it has already been done in hanging sacks along with other existing practices since 2012. It has been experienced in growing and managing such plants in different types of sacks e.g. using inexpensive bags like Hessian bags, shopping bags and polyethylene and gunny bags and also gathered knowledge on using grey water, organic farming practices, minimizing costs and recycling of materials.

#### ***B.1. Plan of Action:***

After the formal approval of the project a preliminary workshop was organized for orientation. Parameters were set and required materials were collected. Experiment was established in due time as per design. Data collection and analysis were completed and first report was submitted to the Ministry of Science and Technology (MoST), Bangladesh in due time. In this regard, a seminar was organized at IUBAT inviting scientists, researchers, technocrats and environmentalists from across the country. After completion of the field trials data were compiled and a workshop was organized; thereby, final report is prepared.

#### ***B.2. Materials and Methods:***

**Study Location:** A pilot project will be practiced in IUBAT campus. Geographical location is 23.8883° North latitude and 90.3909° East longitude.

**Study Period:** March 11, 2017 to July 31, 2018

**Sacks and Pots:** Hessian bags, jute, polythene, plastics; earthen and plastic pots and containers were used. For hanging sack plants, bamboo, wooden and polyvinyl posts and racks were erected.

**Bamboo Racks:** Two 100 feet long double-storied bamboo racks were erected to hang 500 plastic bags filled with six kg soil in each. At the top of the racks, galvanized wires were connected end to end. From the wire, jute strings were hanged to support the climbing crops like Yard Long Bean, Country Bean, Bitter Gourd and Spinach.



**Crop Selection:** For this project, crops were selected according to their growing habitat and season. Considering the crisis of vegetables and spices in summer and wet seasons, crops of summer and all season were given priority; those can meet the demand in the crisis period. Selected species were tomato Krishibid Rubi F1, Yard long bean, chili Krishibid Tezi, Bitter gourd CV Goj Karala, Egg plant Parthib F1, Mint, Country bean, Lady's finger, Spinach (Pui Shak Green and Pink), Sweet basil Thai and Lemon basil Chattogram Hill Tracts (CHT) Jhum.

**Seed Collection:** Seeds from Bangladesh Agriculture Research Institute (BARI), Krishibid Seed, Lal Teer, ACI, CHT and Sweet basil seeds were collected from Thailand.

**Soil and Compost** were collected and sacks were filled under recommended proportion. Analysis of soil and plant parts were done to ensure maximum production and to maintain optimum soil nutrient status. The organic status of collected soil was very poor, 0.9% only. Therefore, well rotten cow-dung compost was added with the soil at the rate of 3:1 to raise the organic matter. The mixed soil contained 2.57% organic matter and the pH was 6.6.

**Slurry preparation:** Two kg of cow-dung was mixed with 20.0 L water in a plastic bucket and allowed to get rotten for the period of three weeks. First application was done on May 25, 2017 and second application on June 10, 2017. Organic fertilizer was applied on June 10, 2017

**Water:** Grey water was used as per requirement. Grey water from IUBAT cafeteria was used as and when required. Organic control methods were applied against pests and diseases. Routine observation and management were done for growth and production of the cultivated crops. Along with watering, diluted cow-dung slurry was used once in a fortnight by a watering can.

Students of the College of Agricultural Sciences of IUBAT were engaged to complete their practicum for graduation. Considering the increasing frequencies of climate change disasters, this study was conducted to find out sustainable coping up methods. During the study relevant information was collected, analyzed and recorded. Rainwater was also a source for water. Very unusual weather with frequent moderate to heavy rainfall prevailed in the early spring and throughout the summer which caused waterlogged condition in the sacks.

The sacks were punched with the nail to drain out the excess water. However, the flooding situation made the condition worse in case of normal field crop production and justified the importance of grow sack plant practice. 500 bags were filled with cow-dung-

compost mixed soil six kg in each. Then seeds were sown with 50 replications of each selected crops. The bags were hung from the bamboo racks placed in North-South direction in the agricultural experimental field of IUBAT.

Although tomato plants can grow under a wide range of climatic conditions, they are extremely sensitive to hot and wet growing conditions, the weather which prevails in the summer to rainy season in Bangladesh. But limited efforts have been given so far to overcome the high temperature barrier preventing fruit set in summer-rainy (hot-humid) season. Its demand for both domestic and foreign markets has increased many times due to its excellent nutritional and processing qualities. Considering the growing demand and importance of tomato, Bangladesh Agricultural Research Institute (BARI) has taken initiative to develop off-season summer and rainy season tomatoes. So far BARI has developed and released hybrid tomato varieties i.e. BARI hybrid tomato-3 and 4 which can be grown during summer and rainy season (Karim et al. 2009). The BARI Tomato 4 was sown and a luxuriant growth had been observed. It flowered but fruit setting failed. Flowering hormone, Tometon was sprayed but little success was observed.

## **Eggplant**

Eggplant, also known as brinjal, is one of the most important, inexpensive and popular vegetable crops grown in Bangladesh. As a densely populated area, the growth and production of brinjal is essential to the region and a primary source of income for poor farmers. Given its importance, scientists and farmers have teamed up to find both economically sustainable and environment friendly ways to tackle crop losses and increase farmers' incomes. Brinjal (*Solanum melongena*) is one of the important vegetable crops grown in all parts of Bangladesh (Rashid, 1995). It has a positive role in both summer and winter to fulfill the market demand of vegetables of Bangladesh. Yield potentiality of the varieties cultivated in Bangladesh is less and choice of brinjal size, shape, and skin colour varies in different locations. Improvement in fruit yield, colour, and insect resistance will certainly enhance the production and consumption of the crop (Islam and Uddin 2009).

During this study, attempt was made to grow brinjal in the sack in summer season especially to produce them out of ground level protecting from flood and water-logging situation. The experiment was very successful.

## Summer Country Bean

Country bean or Lab lab bean is a leguminous vegetable crop of Bangladesh and it is usually cultivated during the winter season. But as almost all the country bean varieties produce fruit in the same period of the season, most of the growers bring their vegetables in the market at the same time as a result a market glut situation occurs for the vegetables i.e. country bean. Naturally market prices fall for the country beans and the farmers usually sell their product in a throw away price and become looser by growing these beans. Moreover, input and labor costs etc. are rising day by day and farmers are not getting much profit by selling their seasonal type vegetables. This is why they are now shifting to the cultivation of off season type vegetables. Keeping this in view, heat-tolerant summer type country bean lines have been developed at BRAC Agricultural Research and Development Centre which not only are producing fruits in the off season, these lines are also found to be profitable for the commercial growers (Biswas 2015). This is a climber crop traditionally grown on the mound. This crop was selected for grow sack project and found very successful. Five harvestings were done and still the plants are flowering. During the study, following results were obtained:

Date of Sowing: April 17, 2017; Date of First Flowering: May 22; Nos. of Harvest: 6; Average Yield/Plant: 1180 gm and average wt of fruit was 4.8 gm each.

Yard long bean Yard long Bean, also called Chinese Long Bean, is a vigorous climbing annual and the plant begins to produce long pods, ranging from 14 to 30 inches, 60 days after sowing. The pods hang in pairs that should be picked for vegetable uses before matured. Yard long Bean is a subtropical/tropical plant and is widely grown in Southeastern Asia, Thailand and Southern China. It is a very interesting plant to grow and it needs to check/harvest long beans everyday because they grow very quick in warm climates. It is, however, sensitive to the temperature and grows relatively slow in mild/cold environments. Like common beans, it is recommended to rotate the planting locations every year for getting the best results -but not to repeat planting at the same spots within 3-4 years. Edible pods are very crisp, tender and delicious. Long beans are cut into shorter sections and cooked like common green beans (Asian Vegetable Seeds). There are many varieties grown in the Orient and they are generally identified by the color of the matured seeds. These beans are very susceptible to water logging.

## **Basil**

Basil comes in hundreds of different shapes, sizes and flavors. The most common herb found in the home garden. Basil can be used in several dishes in home cuisine. Growing of several varieties and testing of different flavors with different meals can be a choice. Basil can easily be grown in the kitchen window, containers or in the home garden (Urban Farmer). Lemon basil has small and fragrant leaves on compact plants delightfully combine the flavors of lemon and basil; excellent for using fresh or dried. In Chattogram Hill Tracts it is known as Sabarang (Chakma) and Hnu (Marma) and the local people use it as salad.

Sweet basil: it is perhaps the most popular and widely used culinary herb. It is a tender annual, aromatic plant with a spicy odor and flavor. It grows 12-18 inches tall and foliage color can range from green to purple. Foliage size can vary from large lettuce-like leaves to very small leaves, half inch in size. It is used to flavor soups, stews, tomato dishes, meat, fish, egg dishes, herb butters and herb vinegars (Herb Gardening, University of Illinois Extension). Basils are very susceptible to water logging.

## **Vine Spinach**

*Basella alba* is an edible perennial vine in the family Basellaceae. It is found in tropical Asia and Africa where it is widely used as a leaf vegetable. It is native to the Indian Subcontinent, Southeast Asia and New Guinea. It is reportedly naturalized in China, tropical Africa, Brazil, Belize, Colombia, the West Indies, Fiji and French Polynesia.

*Basella alba* is known under various common names, including Malabar Spinach, vine spinach, red vine spinach, climbing spinach, creeping spinach, buffalo spinach and Ceylon spinach among others.

Vine spinach (Pui Shak) is a popular tropical leafy-green vegetable commonly grown as backyard plant in the home gardens. The plant is a creeping vine, and its leaves' feature is glossy, deep green, thick, broad and mucilaginous. Pui is high in Vitamin A and C as well as Iron and Calcium. It is low in calories but has a good protein/calories ratio, and plenty of soluble fiber. Its thick, fleshy leaves are a good source of non-starch polysaccharide, the mucilage. In addition to regular fiber (roughage) that found in the stem and leaves, mucilage facilitates in smooth digestion, brings reduction in cholesterol absorption, and helps to prevent bowel movement problems (Chaldal.com).

## **Bitter Gourd**

*Momordica charantia*, known as bitter melon, bitter apple, bitter gourd, bitter squash, or balsam-pear, (Bagchi, 2005) is a tropical and subtropical vine of the family Cucurbitaceae, widely grown in Asia, Africa, and the Caribbean for its edible fruit. Its many varieties differ substantially in the shape and bitterness of the fruit.

Bitter Gourd (or Karala) primarily a summer vegetable, possibly a native of India or South-East Africa. The crop is rich in carotene, calcium and iron; can be grown in any type of soil but loamy to sandy loamy soils are preferred for better growth and quality fruit. Seeds are directly sown in the field. Sometimes seedlings are raised and 15-20 days old seedlings are transplanted in the main field during March to May. Ucchya, the smaller ones, has no specific local variety but the larger one, Karala, has a local variety known as Gaj Karalla. The yield of Karala is 15-18 m tons/ha. Bitter gourd is consumed by making curry or frying.

Bitter melon originated in India and was introduced into China in the 14th century. It is widely used in East Asian, South Asian, and Southeast Asian cuisine.

This herbaceous, tendril-bearing vine grows up to 5 m (16 ft) in length. It bears simple, alternate leaves 4–12 cm (1.6–4.7 in) across with three to seven deeply separated lobes. Each plant bears separate yellow male and female flowers. In the Northern Hemisphere, flowering occurs during June to July and fruiting during September to November.

The fruit has a distinct warty exterior and an oblong shape. It is hollow in cross-section with a relatively thin layer of flesh surrounding a central seed cavity filled with large, flat seeds and pith. The fruit is most often eaten green, or when it is turning to yellow. At this stage, the fruit's flesh is crunchy and watery in texture, similar to cucumber, chayote or green bell pepper, but bitter. The skin is tender and edible. Seeds and pith appear white in unripe fruits; they are not intensely bitter and can be removed before cooking.

## **Chili**

Chili is a valuable spice and also one of the most important cash crops grown in Bangladesh. It is available and used in the form of green, dried and powdered. It has become an essential ingredient in Bangladeshi meals. Most of our households always keep a stack of fresh hot green chilies at hand, and use them to flavor most curries and dry dishes. It is typically lightly

fried with oil in the initial stages of preparation of the dish. It has diverse uses. The people of Bangladesh use chilies in all curry preparation like meat, fish, vegetables, pulses etc. for its typical color, taste and flavor. Red chilies contain large amounts of vitamin-C and small amounts of carotene (pro-vitamin-A). Green chilies (unripe fruit) contain a considerably lower amount of both substances. In addition, peppers are a good source of most vitamin-B and vitamin-B6 in particular. They are very high in potassium, magnesium and iron (BBS 2015).

Chili is an important spice in Bangladesh for its widely uses in cooking as well as nutritional value. It has traditional value in Bangla culture for its hot taste. Chili is a valuable spice and also one of the most important cash crops grown in almost all districts in Bangladesh. Its production offers suitable options for consumption and income generation.

Lady's finger [*Abelmoschus esculentus* (L.) Moench] is an annual vegetable crop in tropical and sub-tropical parts of the world. It is one of the important nutritious vegetable crops grown round the year in Bangladesh. Vegetable availability in Bangladesh is primarily concentrated in the winter season. The shortage of vegetables prevails from June to September (rainy season) due to lower production. Of the total vegetable production, around 70% is produced during Rabi season and the rest 30% in Kharif season. There is crucial need to increase vegetable production during rainy season through proper management techniques or introducing new rainy season vegetables. Lady's finger as a summer/ rainy season vegetable can play a vital role in this regard (Firoz *et al.* 2007).

Date of Sowing was April 14, 2017; Date of First Flowering: May 16, 2017; Nos. of Harvests: 10; Average Yield/Plant: 745 gm and average wt of the fruit was 12 gm/each.

## **Mint or Mentha**

*Mentha piperita* is also known as mint, is in the family Lamiaceae. It is estimated that 13 to 18 species exist, and the exact distinction between species is still unclear. Hybridization between some of the species occurs naturally. Many other hybrids, as well as numerous cultivars, are known. The genus has a sub-cosmopolitan distribution across Europe, Africa, Asia, Australia, and North America (Brickell and Zuk 1997).

Mints are aromatic, almost exclusively perennial, rarely annual herbs. They have wide-spreading underground and overground stolons and erect, square, branched stems. The leaves are arranged in opposite pairs, from oblong to lanceolate, often downy, and with a serrated margin. Leaf colors range from dark green and gray-green to purple, blue, and

sometimes pale yellow (Brickell *et al.* 1997). While the species that make up the genus *Mentha* are widely distributed and can be found in many environments, most grow best in wet environments and moist soils. Mints will grow 10–120 cm tall and can spread over an indeterminate area. Due to their tendency to spread unchecked, some mints are considered invasive (Brickell and Cole 2002). During this study, no cow-dung slurry but river sand was used monthly.

Date of Sowing was April 17, 2017; Date of First Harvesting: May 6, 2017; Average Yield/Pot was 159 gm and 14 gm/10 twigs.

## **Discussion**

During the study, an unusual weather had been prevailing especially in the early monsoon huge rainfall was received which caused temporary water logging in the sacks. Therefore, a special arrangement was made to remove the excess water by punching the bags with narrow nails. However, overall growth of the plants was satisfactory. With summer tomato, although a luxuriant flowering was observed but no fruit-setting was there despite using of flowering hormone. The vertical growth was recommendable and average height was 105 cm. The failure might be resulted from high intensity of light as the plants were uncovered. However, growing tomato in sack during winter was very successful. Egg plants had a tendency for vertical growth and yielded satisfactorily. Observation showed that the growth and production of Country beans were very good. It may be considered as a very prospective crop for grow sack cropping. Yard long bean resulted a very good growth and production was satisfactory. However, mild attack of Aphids was observed in later season (July and August) which was controlled manually. Both Sweet and Lemon basils showed nice growth and production was satisfactory. Average height of Sweet basil attained 92 cm and Lemon basil was 71 cm and still they were growing. Both green and pink vine spinach had profuse growth and the vines were harvested fortnightly. It is very easy to maintain their cultivation in the sacks. The Bitter gourd also showed promising growth with a good harvest. All the three varieties of chilies had good growth and production. Lady's finger and *Mentha* were grown on earthen pots to give them more space at the base for their growth. Special care was taken for the *Mentha* by applying only river-sand following traditional practice instead of cow-dung slurry and a thick growth was found. During the experiment, a severe flood occurred that lasted for three weeks. The ground crops were heavily damaged while the Grow Sack plants were growing normally.



## Conclusion

Grow sack plants are unique to get fresh vegetables, spices and fruits in adverse situations like floods, water-logging and droughts especially in the pre-, post- and wet monsoon. Moreover, it can be grown in the urban and rural homesteads using less or no-land. It is very inexpensive, nicely grown in recycled bags, earthen pots and containers. It is a great source of fresh and organic foods. The use of simple technology, grey water, cow-dung slurry and traditional knowledge and participation of all members of a family has a great opportunity for such a very successful cropping culture.

## References

1. Acton, D. (2011). Can discarded Supermarket Carrier bags be the salvation of world hunger. *Rotary International in North West England and Isle of Man*. Retrieved from <http://www.rotaryonline.org.uk/rotaryonline/2011/04/can-discarded-supermarket-carrier-bags-be-the-salvation-of-world-hunger.html>
2. Asian Vegetable Seeds- Evergreen Seeds. Retrieved from <http://www.evergreenseeds.com/asbeanyarbea.html>
3. Bagchi, I. (2005). Food for thought: Green 'karela' for Red China. *Times of India* (11 April 2005).
4. Bangladesh Bureau of Statistics (BBS). (2005). *Compendium of Environment Statistics of Bangladesh*. Government of Bangladesh, Dhaka, Bangladesh.
5. BBS. (May 2015). *Report on the Productivity Survey of Chilli Crop 2014*. Bangladesh Bureau of Statistics. Statistics and Informatics Division Ministry of Planning.
6. Biswas S.C. (2015). Summer country bean raises farm income in Bangladesh. Retrieved from [https://www.researchgate.net/publication/305894808\\_Summer\\_country\\_bean\\_raises\\_farm\\_income\\_in\\_Bangladesh](https://www.researchgate.net/publication/305894808_Summer_country_bean_raises_farm_income_in_Bangladesh)
7. Brickell, Christopher & Cole, Trevor. (2002). *The American Horticultural Society: Encyclopedia of Plants & Flowers* (pp. 605). New York, NY: DK Publishing.
8. Brickell, Christopher & Zuk, Judith D. (1997). *The American Horticultural Society: A-Z Encyclopedia of Garden Plants* (pp. 668). New York, NY: DK Publishing.
9. Chaldal.com. Retrieved from <https://chaldal.com/pui-spinach-pui-shak-1-bundle>
10. Dhaka Monthly Weather Average. Retrieved from <https://www.worldweatheronline.com/dhaka-weather-averages/bd.aspx>



11. Firoz, Z. A., Islam, M. A., Mohiuddin, M., & Rahman, M. M. (2007). Yield and yield attributes of okra as influenced by planting time and plant spacing in hill slope condition. *Progressive Agriculture*, 18(2), 67-73.
12. Herb Gardening: University of Illinois Extension. Retrieved from <http://extension.illinois.edu/herbs/basil.cfm>
13. Islam, M. S., & Uddin, M. S. (2009). Genetic variation and trait relationship in the exotic and local eggplant germplasm. *Bangladesh Journal of Agricultural Research*, 34(1), 91-96.
14. Karim, M. R., Rahman, M. S., & Alam, M. S. (2009). Profitability of summer BARI hybrid tomato cultivation in Jessore District of Bangladesh. *Journal of Agriculture & Rural Development*, 7(1 & 2), 73-79.
15. Rahman, M. A., & Rahman, S. (2015). Natural and traditional defense mechanisms to reduce climate risks in coastal zones of Bangladesh. *Weather and Climate Extremes*, 7, 84-95.
16. Urban Farmer. Retrieved from <https://www.ufseeds.com/product-category/herbs/basil>

## The Concept of “*Other Authorities*” within the definition of State and Judicial Response

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### **Abstract**

The Part-III of Constitution of India provide fundamental rights but these rights are basically available against the state. However in the era of welfare state particularly after 1990 the scenario has entirely been changed. It is almost impossible to confine the ambit of fundamental rights protection only by the state. The activities of national and multi-national companies are somehow directly or indirectly affecting the persons and citizens of the country. According to Article 12 of the Constitution of India, the term ‘State’ denotes the union and state governments, the Parliament and state legislatures and all local or other authorities within the territory of India or under the control of the Indian government. Over the years, many bodies, which have been vested with the power to make laws and have been created by the Constitution of India, have also been included within the ambit of a State. Thus, a mere regulatory power of the government over any statutory or non-statutory body is not enough for it to be deemed as a State. The concerned body has to be financially, functionally and administratively and pervasively controlled by the government. However, there is still need to be more specific with present circumstances.

**Keywords:** Constitution of India, Judicial Response, Other Authorities, State Action

The Supreme Court of India in its judgment in *Indian Council for Enviro-Legal Action v. Union of India*<sup>1</sup> held that private corporate entities cannot claim exemption from the scope of Article 32 of the Constitution of India and if it found that authorities have not taken action required of them by law, by which the right to life of citizens of the country is jeopardized, it is the duty of the Court to intervene.<sup>2</sup> The Court further held that its pronouncement, in an earlier decision, *M.C.Mehta v. Union of India*,<sup>3</sup> was correct and could not be said to contain any *obiter* observations regarding whether a private company was amenable to the directions of the Supreme Court under its writ jurisdiction.<sup>4</sup> This unquestionably means that even private corporate entities may be considered to be “the State”<sup>5</sup> and subjected to the control of Fundamental Rights.

However, in *Pradeep K. Biswas v. Indian Institute of Chemical Biology*,<sup>6</sup> the Court held that for an authority or agency or instrumentality to be considered as ‘State’ it must be shown in the light of cumulative facts that the body is financially, functionally and administratively dominated by or under the control of Government and that such a control is particular to the body in question and must be pervasive. If this is found then the body is a ‘State’ within Article 12. If however, the control is merely regulatory, whether under a statute or otherwise, it would not serve to make the body a State.<sup>7</sup> Extending this further in *Zee Telefilms v. Union of India*<sup>8</sup> the Court, while analyzing the meaning and scope of the term “other authorities” under Article 12, held that the term “other authorities” was introduced at the time of framing of the Constitution with a limited objective of granting judicial review of actions of such authorities which are created under the Statute and which discharge State functions. However, because of the need of the day this Court in *Rajasthan State Electricity Board Electricity Board*<sup>9</sup> and *Sukhdev Singh*<sup>10</sup> noticing the socio-economic policy of the

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<sup>1</sup> (1996) 3 SCC 212

<sup>2</sup> *Id*; at p. 238.

<sup>3</sup> AIR 1987 SC 1086

<sup>4</sup> *Supra*; n.1; at p.238

<sup>5</sup> See Articles 12 and 36, respectively, of the Constitution of India.

<sup>6</sup> (2002) 5 SCC 111

<sup>7</sup> *Id*; at p. 134.

<sup>8</sup> (2005) 4 SCC 649

<sup>9</sup> AIR 1967 SC 1857

country thought it fit to expand the definition of the term "other authorities" to include bodies other than statutory bodies. This development of law by judicial interpretation culminated in the judgment of the 7-Judge Bench in the case of *Pradeep Kumar Biswas*.<sup>11</sup> It is to be noted that in the meantime the socio-economic policy of the Government of India has changed.<sup>12</sup> Therefore, the situation prevailing at the time of *Sukhdev Singh*<sup>13</sup> is not in existence at least for the time being, hence, there seems to be no need to further expand the scope of "other authorities" in Article 12 by judicial interpretation.<sup>14</sup> This approach was reaffirmed by the Court in *V.K. Sodhi v. Lt. Governor of Delhi*.<sup>15</sup>

### Why State action?

The above stated propositions put forth two different approaches in appreciating what constitutes "state action". To understand these approaches it would be useful for us to appreciate why there is a need to have a concept of 'State action'. There may be three possible explanations for this-one based on history, one based on the text of the constitution and one based on policy arguments that the doctrine of state action enhances individual autonomy and safeguards federalism.<sup>16</sup> The need to appreciate the concept of 'State action' arises from the fact that the Fundamental Rights that are guaranteed in the Constitution<sup>17</sup> can be enforced

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<sup>10</sup> AIR 1975 SC 1331

<sup>11</sup> (2002) 5 SCC 111

<sup>12</sup> The Court relied upon *BALCO Case* in this regard. [See *BALCO Employees Union (Regd.) v. Union of India* (AIR 2002 SC 350; at p.369)].

<sup>13</sup> AIR 1975 SC 1331

<sup>14</sup> *Zee Telefilms Ltd v. Union of India* [(2005) 4 SCC 649; at p.684];

<sup>15</sup> AIR 2007 SC 2885

<sup>16</sup> Cherminsky, Erwin. *Constitutional Law: Principles and Policies*. ASPEN Publishers, New York. Third Edition, 2006; p. 511.

<sup>17</sup> Fundamental Rights differ from ordinary legal rights in the sense that while the latter are protected and enforced by ordinary law of the land, the former are guaranteed, protected and enforced by the fundamental law of superior obligation, i.e. the constitution of the state. While ordinary rights may be changed by the legislature in its ordinary process of legislation, a fundamental right, being guaranteed by the Constitution, cannot be amended by any process shorter than that required for amending the Constitution itself. [See Blackshield, A.R. *Fundamental Rights and the Economic Viability of the Indian Nation*. 1968 *Journal of Indian Law Institute* (January-March) Vol. 10, p.3. Also see observations by Miller, J, in *Citizen's Loan & Saving Association v. Topeka* (1874) 20 Wall 655 and Shastri, J, in *A.K. Gopalan v. State of Madras* (AIR 1950 SC 27).

only against an entity that satisfies the definition of the term 'State' in Article 12 of the Constitution. So also 'State' must take into consideration the Directive Principles of State Policy, while framing policies and the laws, for these principles are fundamental in the governance of the country.<sup>18</sup>

To appreciate the concept of 'state action' it is necessary to appreciate what is 'State' and what role is played by the constitution vis-à-vis 'State'. State is a body politic, or society of men, united together for the purpose of promoting their mutual safety and advantage by joint efforts of their combined strength.<sup>19</sup> A Constitution may be defined as the fundamental law of the state, containing the principles upon which the government is founded, regulating the division of sovereign powers, and directing to what persons each of these powers is to be confided, and the manner in which it is to be exercised.<sup>20</sup> Constitutions therefore, organize and control power, ensure human rights, balance the competing claims of social and individual interests, mirror the culture and experience of the country, and operate as vehicles of national progress and unity.<sup>21</sup> Thus, essential quality of Constitutionalism is as a legal limitation on government.<sup>22</sup>

The present doctrine of 'State action' had its origins in the American Constitution<sup>23</sup> and the interpretation of the constitutional provisions by the American Supreme Court.<sup>24</sup> In India the doctrine of 'State action' has a wider application than in U.S.A., because of the text

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<sup>18</sup> Article 37 of the Constitution of India.

<sup>19</sup>Dias, R.W.M. Jurisprudence. Butterworth & Co (Publishers) Ltd, Fifth edition (First Indian Reprint), p. 60-61.

<sup>20</sup>Cooley. M. A Treatise on Constitutional Limitations, Hindustan Law Book Company, Calcutta, First Indian Reprint 2005, p. 3. Also see *India Cements Ltd v. State of Tamil Nadu (AIR 1990 SC 85)*.

<sup>21</sup>Lowenstein, Karl. Political Power and Governmental Process. The University of Chicago Press. Second Edition, 1965, p.70. Also see, the Preamble to the Constitution of India.

<sup>22</sup> Lowenstein, Karl: Political Power and Governmental Process. The University of Chicago Press, Second Edition, 1965, p.70.

<sup>23</sup> See the First, Fifth and the Fourteenth Amendments to the American Constitution.

<sup>24</sup>See generally, *Strauder v. W. Virginia (1879) 100 U.S. 303; Ex Parte Virginia (1880) 100 U.S.339 (347); Pennsylvania v. Board of Trustees (1957) 353 U.S. 230*. (Also See Geoffrey. R. Stone, Mark. V. Tushnet (et al). Constitutional Law. Little Brown and Company, Boston, Second edition, 1991.)

of the Constitution. The Constitution of India, in Parts III and IV, therefore, provides for an inclusive definition of the expression ‘the State’.<sup>25</sup>

The onset of the process of Liberalization/Globalization, in a big way, in the last decade of the twentieth century, has brought about fundamental changes in the economic field, in particular, and in other fields, consequentially or incidentally. As a consequence of the policy of disinvestment/privatization the commanding heights of the Indian economy are no more socially owned. This policy has led to the withdrawal by the ‘State’ from various sectors, and non-state/private corporations, particularly multinational corporations have stepped in, in a big way to fill in the void created by this withdrawal. With the role of the state being reduced, and in many cases being supplanted by non-state/government/private sector, the common people have to deal and interact with these entities in many diverse capacities.

With these corporations’ increasingly performing functions, which hitherto were performed by the ‘State’ or the Government, there are increasing instances of fundamental rights violations as a consequence of the actions of these entities. The Bhopal Gas Disaster<sup>26</sup>, Oleum Gas Leak matter in Delhi<sup>27</sup>, the pollution of underground water as result of effluents discharged from a Sulphuric Acid manufacturing factory, in Rajasthan<sup>28</sup>, recent air pollution in Delhi etc are a few illustrations of these violations. In all such matters the moot question before the Court was how to bring these non-state/private entities within the ambit of the expression “other authorities” under Article 12 of the Constitution of India, so as hold them responsible for Fundamental Right violations. In all these cases interestingly the petitions were entertained by the Court under Article 32 of the Constitution, but the Court stopped short of pronouncing that these entities were covered by the expression “other authorities” under Article 12 of the Constitution. More serious consequences are in the offing. For instance the Government of India is planning to introduce measures to protect the American companies, who supply nuclear technology/fuel to India in pursuance of the 123 Agreement,

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<sup>25</sup> Articles 12 and 36 of the Constitution of India, respectively.

<sup>26</sup> See *Charan Lal Sahu v. Union of India* [(1990) 1 SCC 613]

<sup>27</sup> See *M.C. Mehta v. Union of India* (AIR 1987 SC 1086).

<sup>28</sup> See *Indian Council for Enviro-Legal Action v. Union of India* [(1996) 3 SCC 212].

from any liabilities and compensation claims in case of nuclear mishaps.<sup>29</sup> So if a disaster like the Bhopal Gas Disaster is repeated or a disaster on the scale of Chernobyl Disaster happens, whether the liability for violations of Fundamental Rights would fall on the Government of India or these corporations, is an open question.

Meanwhile, taking note of policy changes on the socio-economic front<sup>30</sup>, the Courts' approach, has undergone a change as well. It is now adopting a more restrained approach when it comes to interpreting the term "other authorities", thereby restricting the scope of application of Part-III. The Court appears to be returning to its older approach in this regard. This revival of the restrictive approach needs to be analyzed in the light of the fact that both right to equality as well as right to life and personal liberty have been held to be a part of the basic structure of the Constitution.<sup>31</sup>

The problem that arises is whether activities of such non-state/private entities constitute 'state action' and therefore, these entities are covered within the ambit of the expression "other authorities". This is necessary in order to see that the actions of these entities are in accordance with the fundamental policy choices made in terms of Parts III, IV and IVA, of the Constitution, respectively.

There exists inconsistency in the judicial approach in defining the concept of 'state'. This inconsistency, in judicial approach seems justified in view of the changes in the economic policies of the state, in the era of liberalization. The trend in expanding the concept of 'State', so as to widen the guarantee of Fundamental Rights, is making way for the revival of conservative view as to the meaning of the 'State'. However, the Courts have been trying to bring in non-state actors, as well, within the ambit of 'State'.

The objective of this paper is to examine, in the light of theoretical propositions and judicial dicta, the above stated hypotheses. To achieve the stated objective, it is indeed need to ponder the following questions:-

1. Why did the makers of the Constitution provide for an 'inclusive' definition of the term 'the State', particularly in Parts III and IV of the Constitution?

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<sup>29</sup> See the Indian Express. Dated: 16/11/09; p.1

<sup>30</sup> *BALCO Employees Union (Regd.) v. Union of India* (AIR 2002 SC 350; at p.369)

<sup>31</sup> See *Indira Nehru Gandhi v. Raj Narain* (AIR 1975 SC 2299). Also see *I.R.Coelho v. State of Tamil Nadu* [(2007) 2 SCC 1].

2. What is the meaning, scope and purpose of the expression “*unless the context otherwise requires*” in Article 12?
3. Whether this inclusive definition of the term ‘the State’, should be interpreted in the light of what is illustratively elucidated to be ‘the state’ under Articles 12 and 36 respectively?
4. What is/are the determining test(s) for identifying a body or an authority or instrumentality as ‘other authority’ so as to identify its action as ‘state action’?
5. Whether there exists inconsistency in the approach of the Courts in interpreting the expression ‘other authorities’?
6. If Fundamental Rights are a bulwark against ‘State action’, can the non-state/private entities and individuals be brought within the meaning of the expression “other authorities”, under Article 12 of the Constitution, so as to subject them to the control of Fundamental Rights?
7. Do changes in the economic policy of the State<sup>32</sup>, provide a viable ground for the Courts, to restrict the scope of the term ‘the State’, and thereby the concept of ‘state action’, in a controlling Constitution, where the Courts’ are recognized as primary instruments of policy control ?

In his work titled, ‘Concept of State and Fundamental Rights’, Dr. Anil Kumar Rai, looks at the concept of ‘State’, as provided for in Article 12 of the Constitution of India, in relation to the applicability of Fundamental Rights, from several perspectives. The focus of the work, which is probably the first such work on the issue, has been on the judicial approach to the question of “other authorities”. His analysis concludes by submitting that three different tests emerge out of the decisions of the Courts to bring an authority within the concept of state: one emphasizes the sovereign character of the functions performed; the other puts emphasis on the statutory origin of an entity; while the third lays down certain guiding principles for identifying if an entity can be called an agency or instrumentality of the State. Thereafter he examines the application of these tests in relation to public institutions and public sector undertakings as well as private educational institutions, cooperatives, and private sector corporations. Dr. Rai’s work was published in 1996, when the full impact of the process of liberalization/disinvestment/privatization was not yet visible. Moreover, a volume of new case

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<sup>32</sup> See the majority judgment in *Zee Telefilms Ltd v. Union of India* [(2005) 4 SCC 649; at p.684]; also see *BALCO Employees Union (Regd.) v. Union of India* (AIR 2002 SC 350; at p.369)



law has appeared on the scene, indicating that the Courts rather than continuing with the expansive interpretation of the concept of 'State', have, in the light of the changed economic policy and the onset of liberalization, adopted a more restrictive view of the term. Secondly, the focus of his work, it is most respectfully submitted, is more on 'what' the Court said as regards the concept of 'State' and any discussion on 'why' the Court so decide a matter is discussed incidentally. Thirdly, insofar as the applicability of the three tests, deduced by the writer are concerned, in relation to private entities only the third test appears to be of some practical value. However, given the inconsistency in the approach of the Courts, in deciding what constitutes an agency or instrumentality, it is not clear what would be the judicial approach on this question. Moreover the writer himself admits that at the time of the publication of his work there was no judgment of the apex Court which could have served as a guiding beacon in this matter. Last but not the least; the writer has examined the concept of state only from the perspective of Fundamental Rights. However, a whole range of issues are still left to be examined, particularly in the light of recent judicial approach in the matter.

## References

1. Rai, U. R. (1994). Reach of Fundamental Rights. *Journal of Indian Law Institute*. 36, 292.
2. Lakshminath, A. (1989). Dynamics of Article 12. *AIR 1989 Journal*, 17.
3. Austin, C. A. (1997). Need for Constitutional Requirement of Equal Opportunity in Employment in Private Corporations: An Indian Perspective. *XXI Delhi Law Review*, 30.
4. Cunningham, C. (n.d.). D. Public Interest Litigation In The Indian Supreme Court: A Study In The Light of American Experience. *SCALE (PIL)*. A 67.
5. Raghavan, V. (1997). Expanding the Horizons of Article 12 of the Indian Constitution: Unwelcome Trend! *XXI Delhi Law Review*, 200.
6. Ramesh. (2000). Judicial Interpretation of Article 12 of The Indian Constitution. 3 S.C.J. 43
7. Sharma. D. (n.d.). The Clear Sky: Interpreting Article 12 through Pradeep Kumar Biswas & Ors v. Indian Institute of Chemical Biology & ors – may be accessed at: <http://www.scj.in/search.aspx?a=art>

## **Affable Contact Impact on Meal Time Skills among Children with Intellectual Disability**

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### **Abstract**

Man is a Affable-cultural being as the Affable contact activities play very important role in human life. The present study was conducted with the aim to evaluate the impact of affable contact on meal time skills among children with moderate intellectual disability (ID). The sample included twelve primary level children with moderate intellectual disability; male and female student are taken in equal proportion who are studying in Educational Lab, ICFAI Tripura. To evaluate meal time skills, the investigator has selected to use the Meal Time Activities Domain from Madras Developmental Programming System (MBPS) - Behavioural Scale developed by Prof. P. Jeyachandran and Prof. V. Vimala in 1975. The quasi experimental pre-test post-test Non-Equivalent group design has been used. In order to select the sample, non-probability sampling design and purposive sampling technique has been used. The recess time was utilized for affable contact activities as intervention for twenty days. Analysis of data rejected two null hypotheses whereas one null hypothesis has been accepted. Result of the study reveals that there is significant impact of the affable contact on developing meal time skills among children with moderate intellectual disability.

**Keywords:** Affable contact activity, Meal time skills, Primary level, Children with moderate intellectual disability

## Introduction

The most distinctive feature of human life is its affable character. All human beings have to interact with each other in order to survive. The great Greek philosopher, Aristotle remarked that ‘Man is an Affable animal.’ Both nature and necessity impel man to live in society. Thus, man is Affable-cultural being and society is both natural and necessary for man. It is difficult for men to live in isolation. They always live in various groups and association. As members of these groups, they act and behave in a certain manner. The behaviour of each individual is affected by the behaviour of others. This contact is essence of affable live. Behaviour systems grow out of affable contact and interaction. Without interaction there would be no affable or group life. Mere physical proximity of individual does not unite them into a group or affable unit. It is only when they mix with one another – interact or talk together to realize a common end or play together or even compete or conflict with one another so that associative life exists. Thus appropriate affable behaviors are necessary for any person to be an acceptable member of the society. Every human being is expected to follow certain standards of affable behaviour, set by the society according to the cultural norms and age level of the individuals.

According to American Association on Intellectual and Developmental Disabilities (2008), “Intellectual disability is a disability characterized by significant limitation both in intellectual functioning and in adaptive behaviour as expressed in conceptual, Affable and practical adaptive skills. This disability originates before the age of 18.”

Significantly sub average intellectual functioning means that the individual has an IQ score of less than 68 or 70 on one of the individually administered standard intelligence test. “Adaptive Behaviour” refers to the skills needed for personal independence and affable responsibility such as dressing, toileting, feeding, behaviour control, independence in community and interaction with peers. “Development period” is defined as the time between conception and 18 years of age. An initial diagnosis of intellectual disability is commonly to be made during this period. All three of these conditions must be met to identify an individual with intellectual disability.

As described by the definition the children with intellectual disability have limitations in adaptive behaviour which include various day to day life skills. If we observe the children with intellectual disability or interview their parents or special educators, they often complain that their children have limitations in meal time skills and they desire that their children

should be able to feed independently and should learn meal time skills so that their better affableization would be possible. Eating and feeding problems have been found to occur across the entire range of ID. Linscheid (1983) described 10 mealtime problems that were prevalent within this population including tantrums, bizarre food habits, multiple food dislikes, food-texture selectivity, delay or difficulty in chewing, sucking or swallowing, delay in self-feeding, pica, excessive overeating, malnutrition through eating very little, and rumination. Later it was suggested that 11 feeding problems could be parcelled into four distinct categories: lack of independent skills, disruptive behaviour, eating too much or too little, and selectivity by type of texture. A wide variety of different disorders, skill deficits, and excess behaviours are considered to be feeding and mealtime problems within the ID population. Failure to thrive is one such disorder, which is characteristic of children who, due to a serious paediatric ailment, have trouble gaining weight. Found within formal diagnostic guidelines of the DSM-IV-TR, disorders seen within the ID population include: feeding disorder of infancy or early childhood, which refers to children who persistently fail to eat adequately and gain weight; rumination disorder, characterized by repeated regurgitation and re-chewing of food; and pica, the persistent eating of non-nutritional substances (Girolami & Scott, 2001). While some of these problems are often associated with infants and children (Johnston, 1993; Riordan, *et. al*, 1984), these problems are also prevalent among adults with ID.

Having such types of problem in children with ID and there are also significant limitation of intellect; they need intensive training to cultivate appropriate Affable behaviours. Instead of keeping them away from the society, giving them chances to mix in the society from the childhood itself will lead them towards gaining Affable competency. The training should be started very early in life. The family, the relatives, neighbours, friends and the society at large are responsible for the Affable skills training of children with intellectual disability.

### **Review of Literature**

A study conducted by Rita L. Bailey and Maureen E. Angell (2005) on a single-subject multiple treatment design counterbalanced across nine participants with moderate to severe and multiple disabilities was used to determine the efficacy of a school-based multi-treatment package (a combined dysphagia treatment and positive reinforcement behaviour management programme) for children and youth (ages 4-17) with feeding problems as compared to use of a

dysphagia treatment program or a positive reinforcement behaviour management program alone. While results found improvement in development of feeding skills and positive mealtime behaviours with all intervention programs, the combined intervention package was the most effective intervention strategy. These results may help professionals establish best practices for treatment of feeding problems in schools.

Matson *et al.* (2006) examined that feeding problems are common among individuals with intellectual disabilities. The aim of the current study was to determine the relationship between food refusal and affable skills in people with intellectual disability. The Screening Tool of Feeding Problems (STEP) was administered to all residents of a large developmental centre. 82 residents who exhibited food refusal, and 81 residents who did not exhibit food refusal were identified by this screening tool. 163 participants were assessed by using the Matson Evaluation of Affable Skills in Person with Severe Retardation (MESSIER). People who exhibited food refusal displayed significantly more negative nonverbal and general negative affable skills when compared to controls. Food refusal was prevalent across all ages, genders, and levels of intellectual disability. As Affable skill deficits are associated with deficits in feeding skills, affable skills training should be considered as a major component of behavioural interventions targeting food refusal in people with intellectual disability.

Debra U and J K Montez (2010) studied that Affable relationships—both quantity and quality—affect mental health, health behavior, physical health, and mortality risk. There are significant role played by Sociologist for establishing the link between Affable relationships and health outcomes, identifying explanations for this link, and discovering Affable variation (e.g., by gender and race) at the population level. Studies showed the Affable relationships have short- and long-term effects on health, for better and for worse, and these effects emerge in childhood and cascade throughout life to foster cumulative advantage or disadvantage in health. This article depicts key research themes for the study of Affable relationships and health, and policy implications are suggested by this research.

### **Need and Significance of the Study**

According to Hallahan and Kauffman (1978), “Special education is a specially designed instruction which meets the needs of exceptional students, through spend materials and techniques.” [7] The needs of children with intellectual disability are different from other children with their same age group. Keeping these point of view special educators and

researcher always put their effort in order to overcome from their limitation and improve their skills by using or applying different materials, strategies and techniques.

So in the present study investigator has used the Affable contact activities as a strategy to evaluate the feeding skills among children with trainable intellectual disability. Though having meal is a general behaviour but it require some specific skills in which children with intellectual disability often lacking behind. That ultimately affects their nutritional requirement and also their Affableization process. Affable contact has a potential to impact the behaviour of children, skills, their Affableization, personal adjustment abilities and as well as adaptive skills which is very important for day today life. In order to consider the relevance of feeding skill, investigator selected this strategy to evaluate impact of Affable contact on meal time skills among children with intellectual disability.

## **Objective**

To assess Affable Contact impact on Meal Time Skills among Children with Intellectual Disability.

## **Hypotheses**

- ✓ There is no significant Affable Contact impact on Meal Time Skills among Experimental group of Children with Intellectual Disability.
- ✓ There is no significant impact of Meal Time Skills among control group of Children with Intellectual Disability.
- ✓ There is no significant difference between Affable Contact impact on Meal Time Skills and Children with Intellectual Disability with respect to gender.

## **Methodology**

The present study employed quasi experimental as pre-test post-test Non-Equivalent group designs is used. Non-Probability sampling design and purposive sampling technique has been used to select the sample of 16 students with sever intellectual disability between 8-10 years studying in primary level in Educational Lab, ICFAI Tripura.

## **Description of the Tool**

**Case Record Data Sheet:** The investigator prepared a Case Record data sheet for collecting personal information about children and their parent's age, sex, types and level of disability, health, educational qualification and locality.

**Madras Developmental Programming System (MDPS) - Behavioural Scale** is designed to provide information about the functional skills of the persons with mental retardation for the purpose of individualized programme planning. The scale comprises 18 domains and each domain have 20 items, so there are total 360 items in the scale. The MDPS was designed to assess adaptive behaviours, through the use of the Behavioural Scale and to produce documents that would facilitate the process of Individualized Programme Planning (IPP). This scale was developed by Prof. P. Jeyachandran and Prof. V. Vimala in 1975. For assessing the functional or adaptive behaviour of the children with intellectual disability the Meal time activity domain have been selected consisting of 20 items. The items arranged in the order of increasing difficulty. The rating of “A” for the successfully performed behaviour on the scale and “B” for unsuccessful behaviour and finally count all ‘As’ scored items and ‘Bs’ scored items.

**Affable Contact Activity:** In order to select suitable Affable contact activity, the researcher went through different books and also collected 05 experts opinion in order to organize recess time activities in which involved special educators, parents of the children with intellectual disability and their siblings and selected activities such as one minute game, musical chairs, spoon race etc. and with especially focus on lunch time activities in group of the children with intellectual disability.

### **Procedure**

After getting the permission from the authority and consent of the selected sample’s parents for the study, the basic information of each child has been collected by using the case record data sheet. Before the intervention, the pre-test was conducted for base line achievement on Meal Time skills by using the selected Meal Time Activities domain of the MDPS. The recess time was utilized for above mentioned Affable contact activities i.e. continued as intervention for twenty days. After the 20<sup>th</sup> sessions the researcher conducted the post-test by using the same tool used for the pre-test to evaluate the effectiveness of Affable contact on meal time skills.

## Result and Discussion

**Table 1: Mean values, SD and t-value of pre and post test scores of Affable Contact on Meal Time Skills among Experimental group of children with ID**

Experimental group	N	Mean	SD	't' value
Pretest	16	6.6	1.65	4.58**
Posttest	16	10.68	2.97	

Maximum score: 20

**Graph 1: Pre and Post test scores of Affable Contact on Meal Time Skills among Experimental group of children with ID**

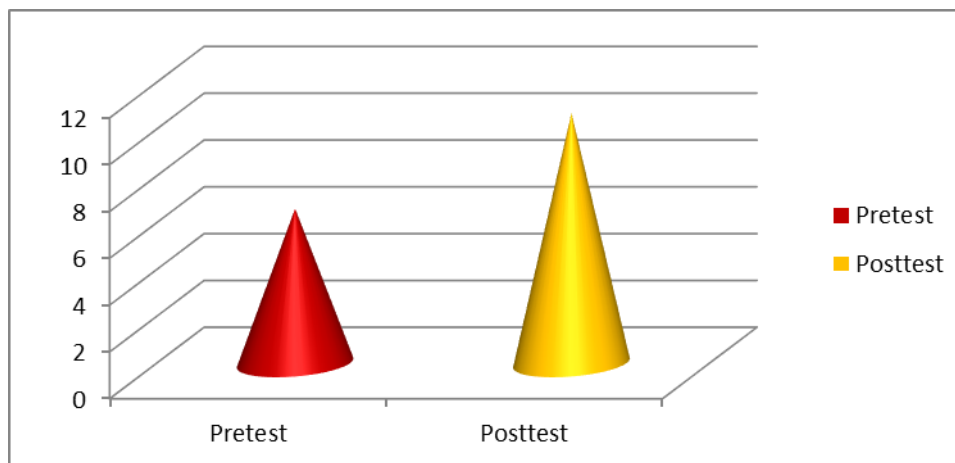


Table 1 and Graph 1 shows the pre and post-test Mean values, SDs and t-value of Affable contact on meal time skills (both male and female children with intellectual disability). As the obtained t-value i.e. 4.58\*\* is more than that of the table value, and its p-value is <0.00101, it can be inferred that, there is statistically significant difference at 0.05 level between pre-test and post test scores. A close observation of the mean values reveals that there is significant increase in the post test scores of the students than that of pre test scores. Hence, it can be concluded that Affable contact activities have highly significant impact on meal time skills among children with intellectual disability.



**Table 2: Mean values, SD and t-value of pre and post test scores of Meal Time skills among control group of children with ID**

Experimental group	N	Mean	SD	't' value
Pretest	16	6.67	1.82	3.58**
Posttest	16	09	1.87	

**Graph 2: Pre and Post test scores of Meal Time skills among control group of children with ID**

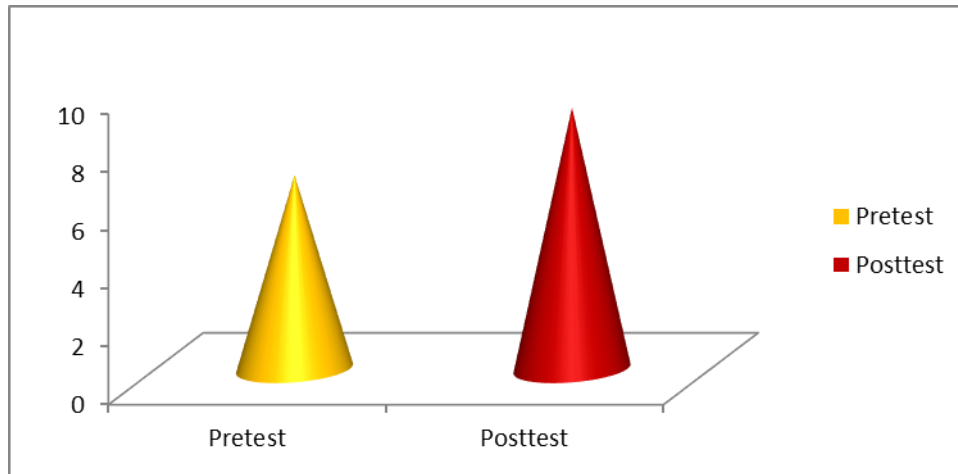


Table 2 and Graph 2 shows the pre and post-test Mean scores, SDs and t-value of control group children with intellectual disability. The pre and post-test means are 6.67 and 9.0; SD is 1.82 and 1.87 respectively. It has been found that the calculated t-value 3.58 is less than that of the table, so there is no statistically significant difference between pre - test and post test scores. Hence, it can be concluded that the null hypotheses has been rejected and the control group does not have significant impact on meal time skills of children with intellectual disability.

**Table 3: Mean Values, SD and t-value of pre and post test scores of Affable Contact on Meal time skills among children with ID with respect of gender**

	Female				Male			
	N	Mean	SD	't' value	N	Mean	SD	't' value
Pretest	8	7	1.2	4.73**	8	6	1.6	2.95**
Posttest	8	11.68	1.53		8	9.77	2.08	

**Graph 3: Pre and Post test scores of Affable Contact on Meal time skills among children with ID with respect of gender**

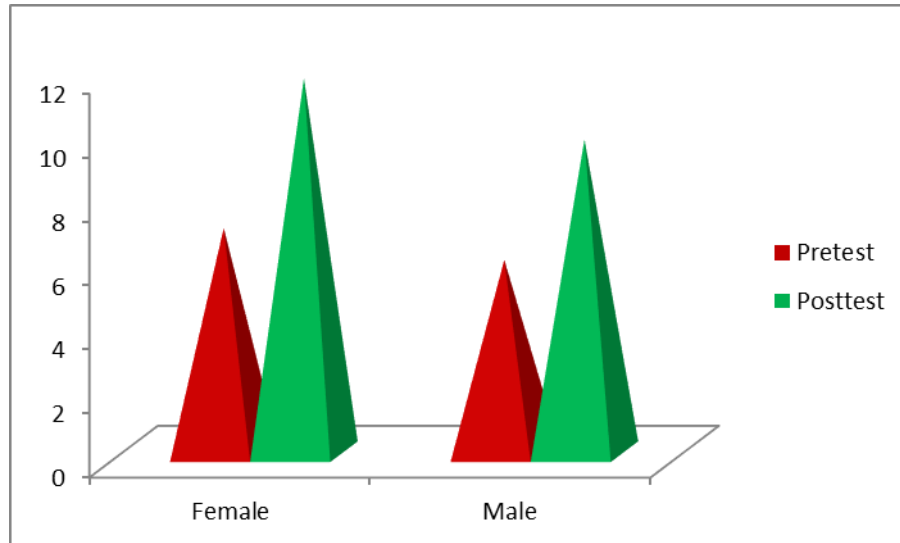


Table 3 and Graph 3 shows the pre and post-test Mean scores, SD and t-value of meal time skills among children with intellectual disability in both groups such as male and female. The pre and post-test means scores of female group are 7 and 11.68. SD is 1.2 and 1.53 respectively. As the obtained t-value 4.73\*\* is more than that of the table value, it can be inferred that, there is statistically significant difference at 0.05 level between pre-test and post test scores of female children with intellectual disability. The pre and post-test means scores of male group are 6 and 9.77. SD is 1.6 and 2.08 respectively. As the obtained t-value 2.95\*\* is more than that of the table value, it can be concluded that, there is statistically significant difference at 0.05 level between pre-test and post test scores of male children with intellectual disability. The result of the analysis shows that Affable contact activities have significant effect on meal time skills among children with intellectual disability with respect to gender.

### **Findings of the Study**

It has been found that there is a significant improvement in meal time skills among experimental group of primary level children with moderate intellectual disability through affable contact activities. In the pre and post test scores showed highly significant impact in experimental group.

It is found that there is no significant improvement in the meal time skills among control group of children with intellectual disability. The pre and post-test means scores there

is no statistically significant difference between pre - test and post test scores among control group.

The pre and post-test means scores of female children and pre and post-test means scores of male children are greater than that of the table value, which shows the significant difference between pre and post test scores. The data analysis shows the positive impact of affable contact activities on meal time skills.

### **Conclusion**

This study revealed that there is significant impact of affable contact on meal time skills among children with moderate intellectual disability in experimental group as well as with respect to gender. By the data analysis, it can be concluded that there is an influence of affable contact on meal time skills more on female children with intellectual disability than that of the male children with intellectual disability. The study confirms that the meal time skills can be taught and improved through the affable contact activities. The analysis of data rejected the two null hypotheses and accepted one hypothesis which proved that affable contact has a significant role in meal time skills among primary level children with moderate intellectual disability.

### **Suggestions**

- The result of the study indicates that the affable contact activities are also an effective way of teaching the various concepts and skills as other methods of teaching. As some parents hide their special children from their affable world, which can affect the growth of the child, so the result of the study emphasized the importance of positive role of affable contact in children's life.
- The result of the study supports to the special educators for using the affable contact as teaching method to improve meal time skills, various skills and concepts. It would be helpful for the children with intellectual disability, in which area they are found difficulties.
- The impacts of affable contact activities can be also seen in different groups of children belong to various levels of intelligence, socio economic status and educational background.

## References

1. Umberson, D., & Karas Montez, J. (2010). Social relationships and health: A flashpoint for health policy. *Journal of health and social behavior*, 51(1\_suppl), S54-S66.
2. Girolami, P. A., & Scotti, J. R. (2001). Use of analog functional analysis in assessing the function of mealtime behavior problems. *Education and Training in Mental Retardation and Developmental Disabilities*, 207-223.
3. Hallahan, D.P., & Kauffman, J.M (1978). *Exceptional Children: Introduction to Special Education*. Englewood Cliffs NJ: Prentice Hall.
4. Hamill, P. V., Drizd, T. A., Johnson, C. L., Reed, R. B., Roche, A. F., & Moore, W. M. (1979). Physical growth: national center for health statistics percentiles. *The American Journal of Clinical Nutrition*, 32(3), 607-629.
5. Johnston, J. M. (1993). Phenomenology and treatment of rumination. *Child and Adolescent Psychiatric Clinics*, 2(1), 93-107.
6. Fodstad, J. C. (2008). A comparison of feeding and mealtime problems in intellectually disabled adults with and without autism.
7. Matson, J. L., Cooper, C. L., Mayville, S. B., & González, M. L. (2006). The relationship between food refusal and social skills in persons with intellectual disabilities. *Journal of Intellectual and Developmental Disability*, 31(1), 47-52.
8. Linscheid, T. R. (1983). Eating problems in children. In C. E. Walker & M. C. Roberts (Eds.), *Handbook of clinical child psychology* (pp. 616s-639). New York: Wiley.
9. Bailey, R. L., & Angell, M. E. (2005). Improving feeding skills and mealtime behaviors in children and youth with disabilities. *Education and Training in Developmental Disabilities*, 40(1), 80-96.
10. Sisson, K.A., Van Hasselt, V.B. (1989). Feeding disorders. In J. K. Luiselli (Ed.), *Behavioral medicine and developmental disabilities* (pp. 45-73). New York: Springer-Verlag.

## A Study on Outcomes of Blended Learning

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### Abstract

Blended Learning in Higher Education Quotes: “The great advantage of online learning is that it makes a permanent record of thinking and therefore offers an opportunity for reflection and increased awareness of the inquiry process.” It is an approach that forms direct and indirect online learning of educational content with the best features of classroom interaction and live instruction to personalize learning. Blended learning is an emerging type of education prepared, to provide a big convenience, by combining the positive aspects of different learning approaches. This approach is to achieve its target by combining the face to face interaction in traditional learning and time, place, and material richness provided by Web-based learning. Blended learning has become the well versed educational program to make an impact in today’s classrooms. From schools to universities, it is being used to bring the digital world and in-class teaching together. This approach gives the ability to be able to create flipped activities which learners can complete pre and post lesson to gain understanding of topics. And these are very beneficial as they allow time in traditional classrooms to focus on extending the learner’s knowledge and to support them in reaching the higher levels of learning. The present study “A Study on outcomes of Blended Learning” was conducted purposefully to find if blended learning is really beneficial. For this purpose, Descriptive method of research was used with samples of 40.

**Keywords:** Blended Learning, Personalize Learning, Flipped Activities, Traditional Learning, Web-Based Learning.

## Introduction

Blended learning is an education program that combines online digital media with traditional classroom methods. It is an approach to education that combines face to face teaching and learning of a classroom with an online presence. It uses technology to combine in-class and out-of-class learning, maximizing the educational impact for students as a result. It is a type of online education, which can serve two goals accessing well, in-person education. Blended learning has made a great impact in today's major classrooms. In many educational institutions, from schools to universities, it's being used to bring the digital world and in-class teaching together. Blended approach is making its way to work alongside with traditional teaching methods. While retaining the traditional student-teacher format, it is also breaking the 'one-size-fits-all' model by extending education beyond the physical classroom. It is allowing the students to learn anytime, anywhere, 24x7. The present education is always promoting and encouraging the students to learn outside of the classroom and this approach is explosion in digital technology that meant that teaching could now be far more engaging. The blended approach also provides the teacher, ability to be able to create flipped activities, where learners can gain pre and post lessons and understand the topics. In colleges and universities, students can contribute more content of their own, both for collaborating with each other, for doing projects, and for assessment purposes. The teachers can also convey assessments, provide immediate feedback and assist students in self-regulation. Thus, it combines online delivery of educational content with the best features of classroom interaction and live instruction to personalize learning. Thus allowing thoughtful reflections, and differentiate instruction from student to student across a diverse group of learners.

Blended learning offers students more flexible delivery options depending on the content and subject of the students. This means teachers can focus on student understanding, rather than the instructional method itself. By using a combination of digital instruction and one-on-one face time, students can work on their own with new concepts which frees teachers up to circulate and support individual students who may need individualized attention. It has many advantages like learners are allowed for more inquiry, utilize more open ended learning, more fun, more practical and present/future learning skills, and also take ownership of their knowledge and can also teach their peers. However, blended learning is beneficial approach until the learner starts personalizing learning. The learners must have a support in their

learning by taking responsibility for their learning. Learners are more motivated to want to learn only when they own and drive their learning.

In modern era, technology, especially mobile devices, allows learning to feel more personal to the learner. Everything is at fingertips. In fact, there are thousands of new apps and online courses available to be taken or enrolled. Textbooks are going digital which are access to content for many learners. Learning objects and games build skills, which engage learners in the content, and are more connected than ever before. Being connected to the content offering opportunities for anyone to learn anywhere anytime, may also lead to distraction. Keeping up with these necessities, to cope with problems that may arise from them, such as the large volume of information and increase in the number of learners, many new teaching and learning methods were ushered such as e-learning and blended learning. Blended Learning aims at interactive learning, resulting in the blending a teacher's role in a traditional classroom with that in the virtual one. The technology applied in blended learning is intended to generate optimal performances by students and to promote learning by facilitating the integration of visual cues and educational concepts. The use of virtual environments acts to capture the attention of the audience involved while augmenting interactions between subject parties. It offers learning opportunities that are sometimes not available in a traditional classroom.

However, technology will never replace great teachers, but technology in the hands of great teachers is transformational.

### **Objectives**

1. To study the benefits / outcomes of blended learning.
2. To find perception of following variables towards blended learning  
(a) Teacher (b) Student (c) Parent

### **Design and Methodology**

Descriptive method is been employed for the present study. Purposive Sampling technique was used to collect the data. A sample of 40 respondents gave their opinions from different categories. Sample was collected from (a) IUT Faculty from different departments who attended LMS workshop (b) few Parents & Students from one of my Whatsapp group.

### **Tools**

Self prepared questionnaire with Likert 5 point scale was employed for the present survey.

## Analysis and Interpretation

*To study the benefits / outcomes of blended learning.*

**Table 1: Blended learning as the latest educational program**

Opinion (%)	SD	D	N	A	SA
Teacher	0	6.7	16.7	53.3	23.3
Parent				100	
Student				100	

It is observed from the findings of Table-1, that Blended learning has become the latest educational program to make an impact in today's classrooms. It is evident that major percent from each category accept Blended learning as the latest educational program.

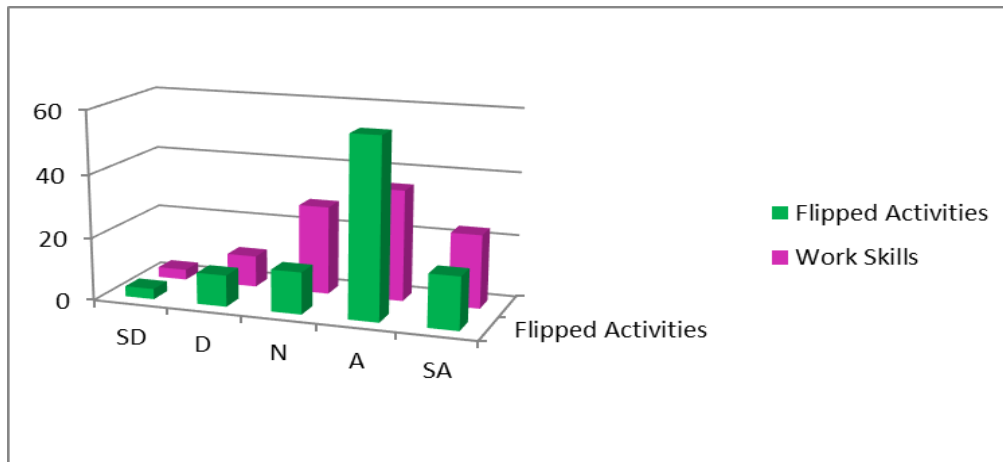
**Table 2: Ability to create flipped activities and Work Skills**

Opinion (%)	SD	D	N	A	SA
Flipped Activities	3.3	10	13.3	56.7	16.7
Work Skills	3.3	10	28.1	35.3	23.3

From the Table-2 and Fig.1, it can be said that blended approach gives teachers, ability to create flipped activities which learners can complete pre and post lesson to gain understanding of topics. The table reflects 73.4% of the samples i.e, teachers, parents and students giving positive thought to blended approach as ability to create flipped activities where learners can gain understanding of topics and 58.6% viewed that Blended learning can improve both teachers and learners work skills.



**Fig. 1: Ability to create flipped activities and Work Skills**



However, it is evident that major percent from each category have a positive thought towards the outcomes of blended learning.

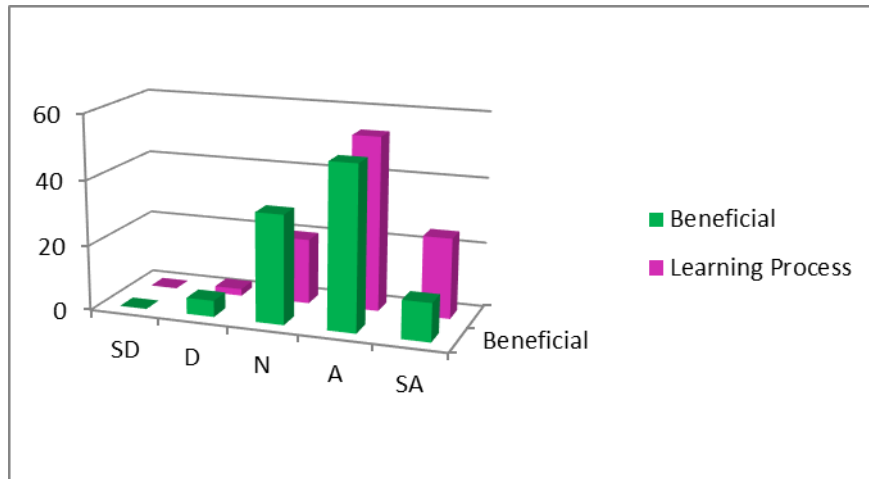
***General Perception towards Blended Learning***

**Table 3: Helps to engage in the learning process**

<b>Opinion (%)</b>	<b>SD</b>	<b>D</b>	<b>N</b>	<b>A</b>	<b>SA</b>
Beneficial	0	5	33.3	50	11.7
Learning Process	0	2.1	20	53.3	24.6

From Table-3 and Fig. 2, it is seen that Blended learning helps the students to engage in the learning process. It was found that 61.7% of them accepted blended approach beneficial, which follows as in-class traditional teaching methods. It was also observed that 77.9 % have proved that blended learning helps students to engage in the learning process and get the best results.

**Fig. 2: Helps to engage in the learning process**

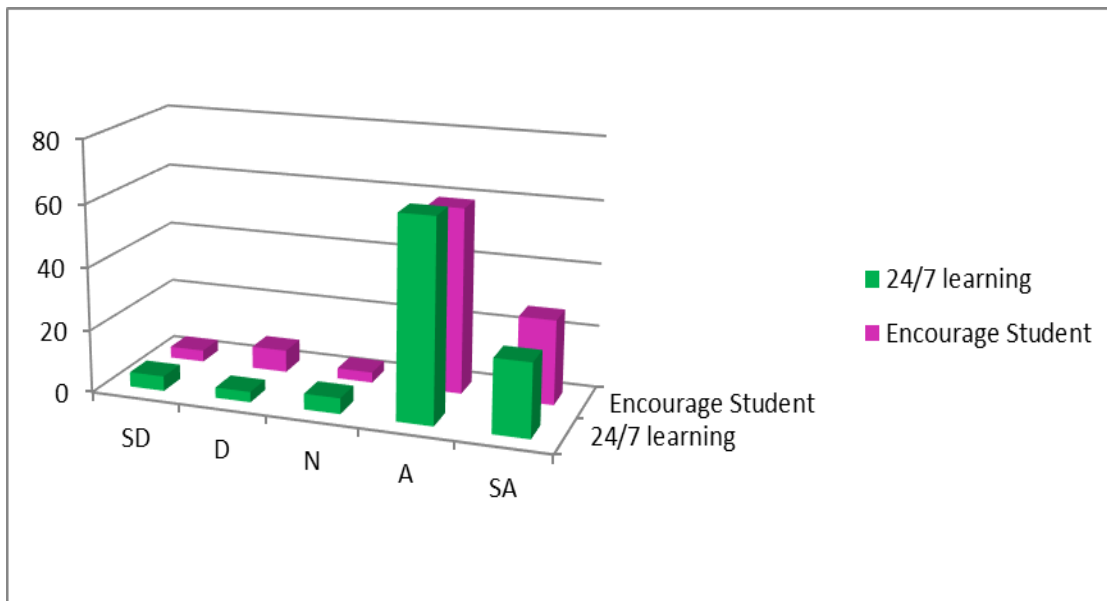


**Table 4: Allows students to access learning**

Opinion (%)	SD	D	N	A	SA
24/7 learning	4.7	3.3	5	63.7	23.3
Encourage Student	3.7	7.1	3.3	59	26.9

It is evident from the above table and Fig. 3 that blended learning classroom, encourages student round ‘O’ clock, both online and offline teamwork opportunities. It is found that 90% are able to access their learning 24x7, and 85.9% of them viewed that students are been encouraged both online and offline teamwork opportunities.

Fig. 3: Allows students to access learning



Overall study reflects the general perception of respondents towards Blended Learning from these findings. It can be viewed that blended learning allows students to engage and collaborate in the learning process, at the same time, also permits teachers to individualize student learning and provide real-world relevance. And teachers too can convey assessments, provide immediate feedback and also assist students in self-regulation as in-class traditional teaching methods.

### Findings

From the study, it is observed that major percent from each category have a positive thought towards the outcomes of blended learning and also accept that blended learning has become the latest educational program to make an impact in today's classrooms. When studied about their perception towards blended learning it was found that this learning is more beneficial when compared with traditional teaching methods only. It was also found that blended learning helps students to engage in the learning process and get the best results and it also allows students to access learning 24/7 from any location, encouraging student both online and offline teamwork opportunities. From these findings, it is clearly seen that blended learning shifts the instructional approach from teacher-centered to student-centered allowing students to engage and collaborate in the learning process. This approach also permits teachers to individualize student learning and provide real-world relevance. The teachers can convey assessments, provide immediate feedback and also assist students in self-regulation.

## Suggestions

From the basic study itself it is seen that blended learning approach is influencing teaching and learning by assisting and collaborating students in 21<sup>st</sup> century communication, as well as engaging the learners to promote real-world relevance. The teacher has to take initiative and motivate students with use of technology to individualize their instruction and create a student-centered environment.

## References

1. Bright, S. (2015). 10 Benefits of teaching in a Blended Learning Classroom. *Whoos's Reading the Blog*. Retrieved from <http://blog.whoosreading.org/10-benefits-of-teaching-in-a-blended-learning-classroom/>
2. Bull, B. (2014). Important questions about Blended Learning. *Etale – Embrace Mission-Minded Innovation*. Retrieved from <http://etale.org/main/2014/03/26/important-questions-about-blended-learning/>
3. Laskaris, J. (2014). 10 Must-Read Articles About Blended Learning. *Talent lms*. Retrieved from <https://www.talentlms.com/blog/top-10-articles-blended-learning/>
4. McGee, P., & Reis, A. (2012). Blended course design: A synthesis of best practices. *Journal of Asynchronous Learning Networks*, 16(4), 7-22.

## Law of Citizenship for the State of Assam with Special Reference to NRC

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### Abstract

Citizenship is a legal membership of a person of a nation. It ensures the person about the rights guaranteed by the state. Primarily the constitution of every country secures certain rights to the citizen of that country. Citizens are given certain legal status also which are not available to the non-citizen or immigrants.

Indian Constitution also outlines provision for citizenship under the Articles 5 to 11. These provisions of citizenship under the Constitution of India laid down the status of citizenship at the commencement of the constitution that is on the date of 26<sup>th</sup> January, 1950. Though India is a federal state having two different sets of government, the centre and the state, it has a single citizenship which is Indian citizenship. The citizenship laid down by the constitution of India is classified into citizenship by Domicile, citizenship by Migration and citizenship by Registration. But these provisions are not exhaustive in that sense that it did not deal with the problem of subsequent acquisition of citizenship. Article 11 of the Constitution, therefore, empowers the Parliament clearly to enact law in such matters. Accordingly, the parliament enacted the Citizenship Act 1955 as entry 17 of List I of the constitution provides exclusive power to the Parliament to enact law on “citizenship, naturalisation and aliens”. The Act also provides the law for acquisition, termination and deprivation of citizenship after the commencement of the Constitution of India. The Act further provides five different ways for acquisition of citizenships, which are namely: Birth, Descent, Registration, Naturalisation and Incorporation of Territory.

The state of Assam for its geographical and socio-political reasons has unique problem of citizenship. When India became independent, initially, a part of this state got separated

from the state and included in the East Pakistan, now Bangladesh. Since then there is a continuous influx of immigrants into Assam which cause a massive threat to the demography of the state. The East Pakistan was liberated in 1971 and formed a new nation called Bangladesh. Thereafter, a friendship agreement took place between India and Bangladesh on 19<sup>th</sup> March 1971. But, even after the liberation of Bangladesh, this influx of illegal immigrant continues. There have been a long agitation of the Assamese people against this issue and there was serious turmoil for this. Finally, there was a memorandum of settlement known as 'Assam Accord' signed between the Government of India and the Assam Gana Parishad on 15<sup>th</sup> August 1985. In pursuance to the 'Assam Accord', the Citizenship Act 1955 was amended in 1985 and Section 6A was inserted as a 'special provision' for the state of Assam. It gives 25<sup>th</sup> March 1971 as a deadline before which those who were settled in this state shall be treated as citizen of India after the expiry of ten years from the date of detection. On December 14, 2014, the Supreme Court of India orders the Central Government to update the National Register of Citizenship (NRC) of 1951 and fixed the time of completion by 2016.

**Keywords:** Assam Accord, Assam Gana Parishad, British India, Domicile, Dominion of India, Partition of India, Refugee, *sui generis*, West Pakistan.

## Introduction

The law of citizenship in India cannot be understood in isolation, without relating it with the context the partition of India in 1947. Indian independence comes alongside the partition of India into two nations i.e. India and Pakistan. When the partition took place, there were immense influx of people occurred from Pakistan to India and *vice versa*. The effect of the partition on the minds of the people who were migrating from one part of the territory of undivided India to another was very sensitively described by Mahajan C.J. he says:

...in October or November 1947, mens minds were in the state of flux. The partition of India and the event that followed in its wake in both Pakistan and India were unprecedented and it is difficult to cite any historical precedent for the situation that arose. Minds of people affected by this partition and there was hardly any occasion to form intentions requisite for acquiring domicile in one place or another. People vacillated and altered their programs on day to day as events happened. They went backward and forward, families were sent from one place to another for the sake of safety. Most of those displaced from West Pakistan had no permanent home in India

where they could go and take up abode. They overnight become refugee, living in camps in Pakistan or India. No one as a matter of fact, at the moment thought that when he was leaving Pakistan for India or *vice versa* that he was for ever abandoning the place of his ancestor.<sup>33</sup>

There are so many instances of deciding citizenship by the Supreme Court of India on the basis of migration from Pakistan to India as for example *Union vs Karam Ali*<sup>34</sup>.

### **Understanding the Law of Citizenship under Indian Constitution**

The Articles 5 to 11 of the Constitution of India deal with the citizenship. This provision can be classified as a) citizenship by domicile, b) citizenship by migration, c) citizenship by registration. The Article 5 states that every person having a domicile in India at the commencement of the Constitution and if he or she was born in India, or either of whose parents were born in India, or who has been ordinarily resident of India for not less than five years immediately preceding the commencement of the Constitution. Domicile means permanent home; therefore, the residence and intention to make it his home is the necessary ingredients to constitute the domicile. Under the Article 6 of the Constitution of India, thereby, deals with the rights of citizenship of certain person who had migrated to India from Pakistan. Notwithstanding anything in the Article 5, a person who has migrated to the territory of India from the territory now included in Pakistan shall be deemed to be a citizen of India at the commencement of this Constitution if (a) he or either of his parents or any of his grand-parents was born in India as defined in the Government of India Act, 1935 (as originally enacted); and (b) in the case where such person has so migrated before the nineteenth day of July, 1948, he has been ordinarily resident in the territory of India since the date of his migration, or in the case where such person has so migrated on or after the nineteenth day of July, 1948, he has been registered as a citizen of India by an officer appointed on that behalf by the Government of the Dominion of India on an application made by him. Therefore, to such officer before the commencement of this Constitution in the form and manner prescribed by that Government: Provided that no person shall be so registered unless he has been resident in the territory of India or at least six months immediately preceding the date of his application. According to Article 8 of the Constitution, a person who, or either of his parents or any of his grandparents was born in India but who is ordinarily

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<sup>33</sup>Central Bank v. Ram Narayan (1955) 1 SCR p 705

<sup>34</sup>See Seervai H M (2015 ed 4, vol 1) constitutional Law of India, p 329, Universal Law Publishing.

residing in any country outside India and Pakistan, may register himself as a citizen of India with the diplomatic or consular representative of India in the country of residence. The partition of India creates the dominion of India and Pakistan. Before the partition, the inhabitants of undivided India were British Indian subject. The disturbance which preceded the partition by a few months and which continued there after led to large scale migration of people from one part of undivided India to another. Had partition been peaceful it would have become necessary to provide for nationality and domicile of the person who got their nationality and domicile against their will. But partition was accompanied by grave violence and disorder; and the mechanism appropriated to settle the problem of nationality was framed by the Articles 5, 6 and 7 of the Constitution. The Article 6 deals with the person who happened to reside in the British Indian territory allotted to Pakistan. Such person might wish to acquire an Indian domicile to become a citizen of India. The Article 6 provides that contingency. The proviso to Article 7 is applicable to the person who left India under the stress of the event or under an apprehension of future difficulties which did not materialise, and who therefore desire to return to India.<sup>35</sup>

The above mentioned provisions of the constitution regarding the citizenship are not exhaustive. These provisions are mainly dealing with the citizenship from the very commencement of the Constitution, but do not deal with the problem of acquisition of citizenship subsequent to that date. The Article 11 and entry 17 List I of the constitution provide exclusive power to the parliament to make law to deal with the problem of citizenship arise after the commencement of the Constitution.

### **Citizenship under The Citizenship Act 1955**

The Act 1955 provides fives ways of acquiring citizenship

- A) Citizenship by Birth: A person is born in India on or after the 26th day of January, 1950, but before the commencement of the Citizenship (Amendment) Act, 1986 and either of whose parents is a citizen of India at the time of his birth, shall be a citizen of India by birth.

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<sup>35</sup>See Seervai H M (2015 edn 4<sup>th</sup>. vol 1) constitutional Law of India, p 335, Universal Law Publishing.



- B) Citizenship by Descent: A person is born outside India on or after the 26th January, 1950, but before the commencement of the Citizenship (Amendment) Act, 1992, shall be a citizen of India by descent if his father is a citizen of India at the time of his birth or after such commencement, shall be a citizen of India by descent if either of his parents is a Citizen of India at the time of his birth.
- C) Citizenship by Registration: The prescribed authority may, on application made in this behalf, register as a citizen of India any person who is not already such citizen by virtue of the Constitution or by virtue of any of the other provisions of this Act. A person registered under this section shall be a citizen of India by registration as from the date on which he is so registered.
- D) Citizenship by Naturalisation: Where an application is made in the prescribed manner by any person of full age and capacity who is not a citizen of a country specified in the First Schedule for the grant of a certificate of naturalisation to him, the Central Government may, if satisfied that the applicant is qualified for naturalisation, grant to him a certificate of naturalisation.<sup>36</sup>

### **Position of Assam as *Sui Generis*:**

As the state of Assam is sharing the international boundary with Bangladesh, there is a continuous influx of population from the neighbouring country despite the Constitution under Article 6 fixed the baseline on 19 July 1948. It is felt a threat to the demography and the culture of the Assamese society for long time. It was during the census of 1951, an NCR was prepared under a directive of the Ministry of Home Affairs containing information village-wise of each and every person enumerated therein. The Bangladesh was liberated from West Pakistan and a treaty of friendship was signed between India and Bangladesh on 19<sup>th</sup> March 1971. Given the continuing influx of illegal migrants from Bangladesh into Assam, the All Assam Students Union first submitted a memorandum to the then Prime Minister of India in 1980 inviting her urgent attention to this issue. As a result of such representations, the Parliament of India enacted the Illegal Migrants (Determination by Tribunal) Act, 1983. This Act was made applicable only to Assam and was expected to be a measure which speeded up the determination of illegal migrants in the State of Assam with a view to their deportation.

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<sup>36</sup>Jain M P, (2008 edn 5<sup>th</sup>) Indian Constitutional Law, p 796, Wadhwa Nagpur

Meanwhile, All Assam Students Union carried out a serious agitation known as ‘Assam Movement’ from 1979 to 1985.

Not being satisfied with this parliamentary measure, in view of large scale agitations in the State of Assam, a memorandum of settlement was signed known as the “Assam Accord” on 15th August, 1985 between the AASU, AAGSP and the Central and the State Governments. According to the Assam Accord, for purpose of detection and deletion of foreigners, 1-1-1966 shall be the base date and year. All persons who came to Assam prior to 1-1-1966, including those amongst them whose names appeared on the electoral rolls used in 1967 elections, shall be regularized. Foreigners who came to Assam after 1-1-1966 and up to 24th March, 1971 shall be detected in accordance with the provisions of the Foreigners Act, 1946 and the Foreigners (Tribunals) Order, 1939. Foreigners who came to Assam on or after March 25, 1971 shall continue to be detected, deleted and expelled in accordance with the law. Immediate and practical steps shall be taken to expel such foreigners.

It was in pursuance of this Accord that Section 6A was inserted in the Citizenship Act in 1985. This provision inter alia state that all persons of Indian origin who came before the 1st day of January, 1966 to Assam from the specified territory and who have been ordinarily resident in Assam since the dates of their entry into Assam shall be deemed to be citizens of India as from the 1st day of January, 1966. Every person of Indian origin who came to Assam on or after the 1st day of January, 1966 but before the 25th day of March, 1971 from the specified territory; and has, since the date of his entry into Assam, been ordinarily resident in Assam; and has been detected to be a foreigner and shall register himself in accordance with the rules made by the Central Government in this behalf; and if his name is included in any electoral roll for any Assembly or Parliamentary constituency in force on the date of such detection, his name shall be deleted there from. A person so registered shall have, as from the date on which he has been detected to be a foreigner and till the expiry of a period of ten years from that date, the same rights and obligations as a citizen of India but shall not be entitled to have his name included in any electoral roll for any Assembly or Parliamentary constituency at any time before the expiry of the said period of ten years. A person registered under the Act shall be deemed to be a citizen of India for all purposes as from the date of expiry of a period of ten years from the date on which he has been detected to be a foreigner.

In the year 2012 and in 2014 large scale riots took place in Assam resulting in the deaths of a large number of persons. It is in this background that writ petitions have been filed. In this *Assam Sammilito Gana Sangha v. Union of India*<sup>37</sup>, the Supreme Court of India on 17/12/2014 orders the Central Government and the State Government to take initiative to update the NRC 1951 and make the final publication of the same by 2016. Meanwhile pursuant to the provisions of Sub rule (3) of rule 4A of the Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2003, the Registrar General of Citizens Registration notified on 5<sup>th</sup> December 2013, in the official Gazette that the enumeration in respect of the State of Assam shall take place from the date of notification and shall be completed within a period of three years. Under the supervision of the Supreme Court, the complete draft of the NRC was published in 30<sup>th</sup> July 2018 and the process of publication of the final NRC is in progress till date<sup>38</sup>.

## **Conclusion**

Citizenship as a legal membership of a sovereign nation recognised by its law and custom. The granting of citizenship depends on the political will of the state. The finalisation of the updated NRC for the state of Assam in the line of Assam Accord as well as the Section 6A of the Citizenship Act 1955, will resolve a long standing problem which is associated with the Assamese social life and the which is guaranteed as a fundamental right of the Assamese people under Article 29 (1) of the Constitution of India.

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<sup>37</sup>MANU/SC/1173/2014

<sup>38</sup><http://www.nrcassam.nic.in/circulars.html>, visited 13-02-2019 23:16:46

## Indian Export and Gross Domestic Product of India

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### Abstract

Gross Domestic Product (GDP) is considered to reflect the economic status of an economy. The strength of an economy is thus determined by the high GDP rate which is largely influenced by several economic operations. Export plays vital role in the development of an economy by selling products and services abroad leading to earnings in the form of domestic currencies, foreign currencies and others means. The impact and contribution of export of a country over rate of GDP has been studied through several researches. Keeping in view the role of export in an economy, the present study has been undertaken in Indian economic context to study the impact of Indian export on Gross Domestic Product of India. For the purpose 10 years data has been taken into consideration ranging from the Financial Year 2008-09 to 2017-18. The paper is based on secondary data as have been mentioned in the methodology of the study.

**Keywords:** Export, GDP, Development, Impact

### Introduction

In present scenario the economies throughout the world have been focusing on maximizing the market share in the global market and strengthening the economic performance of the respective nations. There are several parameters to measure the economic development of nation among which unemployment, Gross Domestic Product (GDP), health index, inflation etc. are significant. GDP is considered as prime barometer to measure the economic growth and development. Increases in GDP reflect economic growth of a nation. Many researchers have attempted to answer whether export promotion leads to higher economic growth or economic growth promotes exports. The proponents of the export-led growth hypothesis

believe that export promotion through export subsidies and devaluation leads to economic growth. Others contradict this by saying that higher economic growth leads to a higher growth in exports. According to them higher growth rate leads to increased productivity which in turn causes growth in exports. Therefore, many developing nations face the dilemma of whether they should open up their economies through export promotion or they should focus on activities within the nation that promote economic growth as a result of which international trade will grow.

Before 1991, India was not an open economy. There were several restrictions on international trade. In this year the country faced a balance of payments crisis as a result of which a number of economic reforms were introduced to liberalize the economy. Several economists believe that the high growth rates that India has been enjoying are a result of increase in international trade. High exports enabled the economy to access international markets and better technology which in turn enhanced the growth rate.

India has one of the fastest growing service sectors in the world with an annual growth rate above 9% since 2001, which contributed to 57% of GDP in 2012–13. India has become a major exporter of IT services, Business Process Outsourcing (BPO) services, and software services with \$154 billion revenue in FY 2017. This is the fastest-growing part of the economy. The IT industry continues to be the largest private-sector employer in India. India is the second-largest start-up hub in the world with over 3,100 technology start-ups in 2018–19. The agricultural sector is the largest employer in India's economy but contributes to a declining share of its GDP (17% in 2013–14). India ranks second worldwide in farm output. The industry (manufacturing) sector has held a steady share of its economic contribution (26% of GDP in 2013–14).

## **Literature Review**

Abundance of literature is available on the export led growth mechanism of different economies. The relationship between the two variables has been put to examine through several studies, however there has been various dilemma over the claim that export always have significant impact over growth of an economy. Before conducting the study, it was important to know the trends by examining the literatures. Having come across several literatures, few have been considered to be significant in extending blueprint of the study. Kaldor (1967) and Krugman (1984) established a one-way causality consequent from export. Marin (1992), through his analysis demonstrates that an “outward-looking” regime enhances the productivity of developed nations, which in turn leads to higher economic

growth. Olsonon (2014) on Latin American countries proves that a higher growth in exports lead to a higher growth in GDP of these nations. Dhawan and Biswal (1999) studied the export led growth in the Indian context considering the relationship between real GDP, real exports and terms of trade between the periods 1961 and 1993. They concluded that there is a long-run relationship between the three variables.

## **Objectives**

- To examine the impact of Export on Indian Gross Domestic Product.
- To examine the relationship between export and GDP.

## **Hypotheses**

1.  $H_0$ = There is no any significant association between Export and GDP of India.
2.  $H_0$ = There is no any significant impact of Indian export on GDP of India.

## **Methodology**

The study is exploratory in nature trying to find out the impact and association between export of India and GDP, and is based on secondary data collected from different issues of Economic Survey of India, GOI including other sources. The time frame considered under study is of 10 years' data ranging from FY 2008-09 to 2017-18. The collected data has been analysed with the help of inferential statistical tools viz. correlation and regression. Besides, graphical presentation has been also used to depict the growth trend of GDP and Indian export during the period under the study.

## **Findings and Analysis**

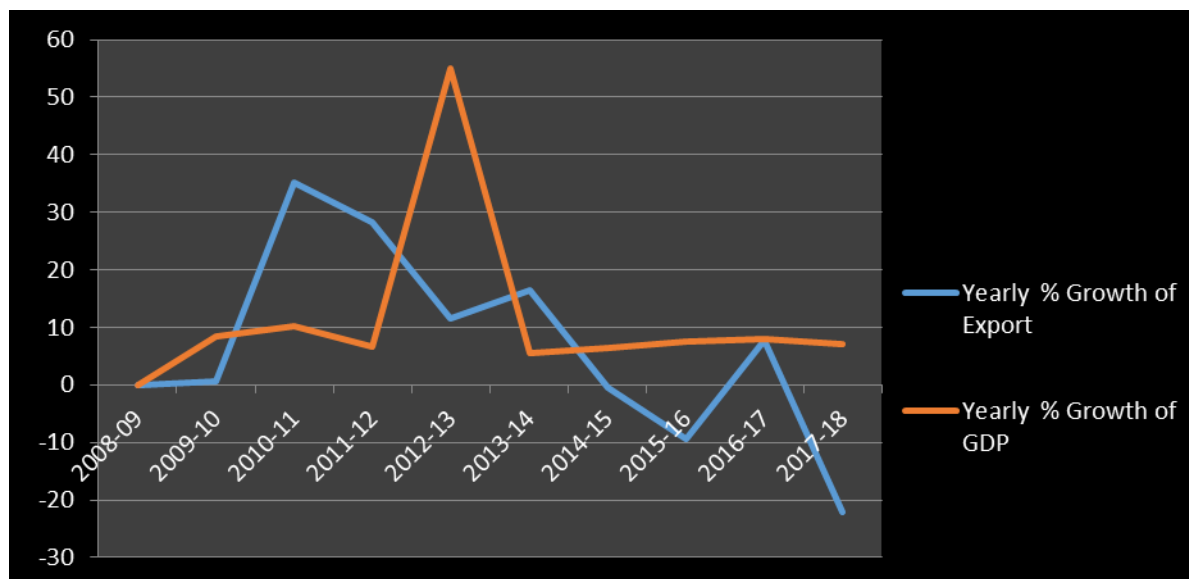
Having analysed the growth trends of Indian export and GDP through yearly percentage growth calculation, the results have been shown through Table 1 and Graph 1.

**Table 1: Trends of Indian Export and Indian GDP during FY 2008-09**

Year	Export	Yearly % Growth of Export	GDP	Yearly % Growth of GDP
2008-09	840755	0	4416350	0
2009-10	845534	0.57	4790847	8.48
2010-11	1142922	35.17	5282386	10.26
2011-12	1465959	28.26	5633050	6.64
2012-13	1634319	11.48	8736329	55.09
2013-14	1905011	16.56	9213017	5.46
2014-15	1896348	-0.45	9801370	6.39
2015-16	1716378	-9.49	10536984	7.51
2016-17	1849429	7.75	11381002	8.01
2017-18	1441420	-22.06	12189854	7.11

Source: Economic Survey of India, Statistical Appendix (Various Years' Reports)

**Graph 1: Growth Trend of Indian Export and Indian GDP**



From the above table it is evident that in few financial years, the export has recorded negative growth trend which shows continuous volatility in indian export over the data previous year, but the GDP yearly growth rate has been found continuously positive, which has been also depicted through the line diagram in Graph 1.

**Correlation Analysis**

**Table 2: Correlation between Indian Export and Indian GDP**

		Export
<b>GDP</b>	Pearson Correlation	.781**
	Sig. (2-tailed)	.008
	N	10

\*\* Correlation is significant at the 0.01 level (2-tailed).

We can see from the above correlation coefficient table, that the pearson correlation coefficient value is .781. As it is evident that the correlation value ranging from .5 to .75 falls under the category of strong correlation, therefore, the value (.781) shows strong correlation between Indian Export and Indian GDP. And the significance value is .008 at 99 percent level of confidence which reflects that, the association between the two variables is significant. Therefore, the null hypothesis has been rejected and alternate hypothesis, 'There is significant association between Export and GDP of India' has been accepted.

**Regression Analysis**

**Table 3: Model Summary**

Model	R	R Square	Adjusted R Square
1	.781 <sup>a</sup>	.610	.562

a. Predictors: (Constant), EXPORT

b. Dependent Variable: GDP

It can be seen from the output table of model summary between and total Export of India, the value of R (correlation) is .781 and R<sup>2</sup> is .610 Here the value of R shows that there is a moderate interdependency among the variables and the value of R<sup>2</sup> shows that 61% variability is caused by the independent variable into dependent variable.

Significance value in ANOVA table output has been found .008, which clearly confirms that, the data set is fit for regression analysis, as is less than the P value .05 at 95% level of confidence.



**Table 4: Regression Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-31292.270	2402827.480		-.013	.990
	Export	5.584	1.577	.781	3.541	.008

a. Dependent Variable: GDP

It can be seen from the regression coefficient table, that the calculated value of significance is .990, which is greater than the P-value .05 at 95% confidence level, which means that the null hypothesis 'There is no any significant impact of export on total GDP of India' has been accepted, as there is no evidence to reject the null hypothesis.

## Conclusion

From the study by means of application of correlation and regression analysis to examine the export and GDP growth of Indian economy few surprising facts have been found. As, commonly it is believed that the growth of export has direct impact over Growth of an economy. It is evident that the GDP is an important parameter to reflect the growth of any nation on economic front, and here, based on the analysis it is evident that though there is strong association between Indian export and Indian GDP, but there is no any significant impact of export on total GDP of India.

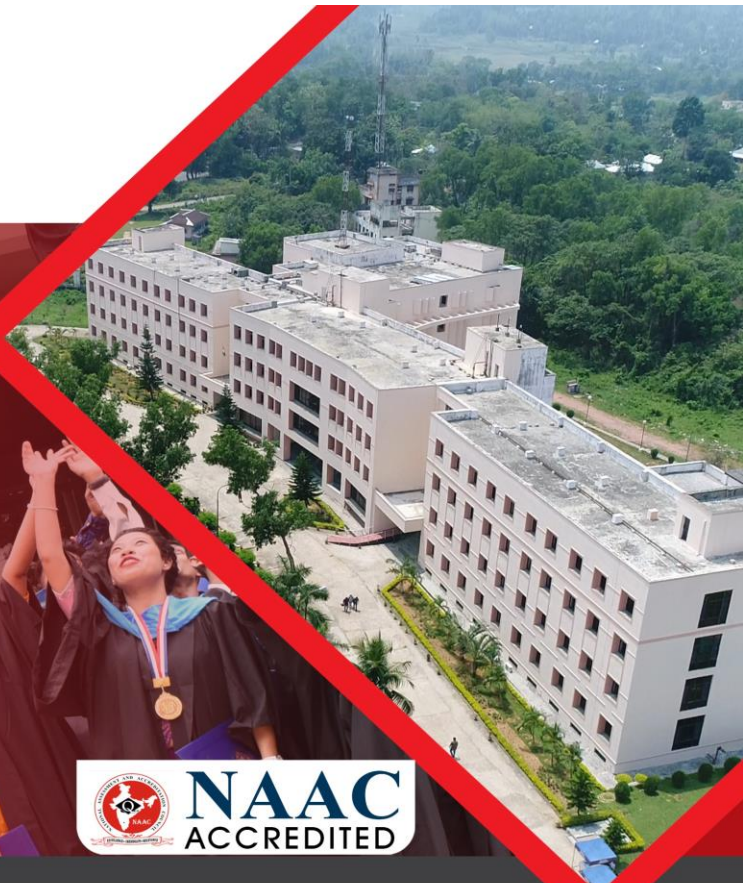
## References

1. Dodaro, S. (1991). Comparative advantage, trade and growth: export-led growth revisited. *World Development*, 19(9), 1153-1165.
2. Granger, C. W. J. (1969). Investigating Causal Relations by Econometric Models and Cross-Spectral Methods. *Econometrica*, 37(3), 424-438.
3. Jung, W. S., & Marshall, P. J. (1985). Exports, growth and causality in developing countries. *Journal of development economics*, 18(1), 1-12.
4. Kaldor, N. (1967), *Strategic Factors in Economic Development*. New York: Ithaca, New York State School of Industrial and Labour Relations, Cornell University.
5. Mallick, S. K. (1996). Causality between exports and economic growth in India: Evidence from cointegration based error correction models. *Indian Journal of Economics*, 76(302), 307-320.
6. Mishra, P. K. (2011). The dynamics of relationship between exports and economic growth

- in India. *International Journal of Economic Sciences and Applied Research*, 4(2), 53-70.
7. Nain, M. Z., & Ahmad, W. (2010). Export-led growth hypothesis in India: some further evidences. *IUP Journal of Monetary Economics*, 8(3), 69-82.
  8. Dickey, D. A., & Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American statistical association*, 74(366a), 427-431.
  9. Economic Survey of India (Various Issues)

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