

**DEVELOPMENT OF A PROGRAMME FOR  
ENHANCING THE ADVERSITY QUOTIENT®  
OF JUNIOR COLLEGE STUDENTS.**

**A dissertation submitted in partial fulfillment  
of the requirements for  
the degree of**

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**Department Of Education**

**S.N.D.T. WOMEN'S UNIVERSITY**

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## **CERTIFICATE**

This is to certify that the Dissertation “Development of a Program for enhancing the Adversity Quotient® of Junior college students”, submitted by Ms. Archana Almeida is a bonafide research. She has worked under my guidance.

I further certify that this work has not been submitted to any other university for the purpose of degree or diploma.

I consider this work worthy for the award of Master’s Degree of Education.

**Dr. Madhura Kesarkar**  
(Guide)

# ACKNOWLEDGEMENT

**“ ALL MEN LIKE TO THINK, THEY CAN DO IT ALONE, BUT A REAL MAN KNOWS THAT THERE IS NO SUBSTITUTE FOR SUPPORT, ENCOURAGEMENT AND GUIDANCE.”**

**----- Tim Allen**

At the outset, I wish to express my deep gratitude to the Almighty for giving me the courage to embark on this project and for all the experiences, both good and bad that I had, during its course of completion.

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# CHAPTER : 1

## INTRODUCTION

### 1.1 INTRODUCTION :

“What is education?

Is it just reading a book?

Is it to try to accumulate various skills?

No!

It is to make our will power and habits channelise into a useful stream of purposeful power.”<sup>1</sup>

These views on education, shared by Swami Vivekananda, compel us to question ourselves again and again. Does the education our youth get today, fulfill the above idea? Does our education take the individuals to a stream of thinking to make them self reliant? The answer could be in the negative.

India needs to introduce and implement this concept of education, which involves various activities, Programmes, to channelise an all-round development of our students. We are aware, that since the last few decades, modern technological advancement and rapid global transformation has posed various hardships and novel challenges to all of us, including our students. There are various challenges; our students are facing in their daily lives.

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<sup>1</sup> What is education – acc-to-Swami Vivekananda – a – birth.htm, retrieved in January, 2009, from <http://srajahiyer.sulekha.com/blog/post/2008/01.html>

Students may face hardships both at home and at school. Lack of basic necessities, lack of educational resources, problems faced during admissions in desired courses, increasing peer pressure and parental expectations, financial problems, gender discrimination, physiological challenges etc... These adversities faced by students, keep increasing as time passes. One of the most revealing facts, uncovered by Dr. Paul Stoltz, is that---‘The average 6 year old laughs 300 times per day, whereas, the average adult, just 17’. ‘This’, he says, ‘is the accumulated effect of adversity over time’.<sup>2</sup> According to Stoltz, the number of adversities an individual faces, during a day, on an average has increased from 7 to 23, in the past ten years.<sup>3</sup> It is here that one’s ‘ADVERSITY QUOTIENT’ plays an important role.

## **1.2 CONCEPT OF ADVERSITY QUOTIENT :**

Dr. Paul Stoltz, has introduced the concept of ‘ADVERSITY QUOTIENT’. According to him, “Adversity Quotient or AQ® is the ability to handle adverse situations. He states, “AQ, measures a person’s ability to prevail in face of adversity and this AQ can be increased, thereby, giving a permanent boost for your ability to survive in crisis and finally succeed”.<sup>4</sup>

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<sup>2</sup> Stoltz,P.G. Adversity Quotient : Turning Obstacles into Opportunities, United States. John Wiley and Sons, Inc 1997, Pg. 43

<sup>3</sup> Surekha. M (2001) Adversity Quotient, The Hindu Opportunities, Retrieved in January, 2009, from [http:// www.hinduonnet.com/Jobs/0110/05030054.html](http://www.hinduonnet.com/Jobs/0110/05030054.html)

<sup>4</sup> Adversity Quotient, what is AQ? Retrieved in June, 2008, from <http://peaklearning.com/>

Adversity Quotient or AQ® is the science of human resilience. People who successfully apply AQ®, perform optimally in the face of adversity—the challenges big and small, that confront us each day. In fact, they not only learn from these challenges, but they also respond to them better and faster.<sup>5</sup>

According to Stoltz, “AQ is about, what it takes to get things done in highly demanding times. Adversity Quotient, is a scientifically grounded theory, that describes, measures and strengthens, how people respond to the full range of adversities, that now comprise a typical day”.<sup>6</sup>

Drawing from three major sciences: Cognitive Psychology, Psychoneuroimmunology and Neurophysiology, Adversity Quotient® embodies two essential components of any practical concept--- scientific theory and real world application.

The work done on AQ®, builds upon the landmark research of dozens of top scholars and more than 500 studies from around the world. As a result of, 19 years of research and 10 years of application, AQ® is a major breakthrough in understanding of what it takes to succeed.

Thus, according to Stoltz, success in work and in life is largely determined by Adversity Quotient®.

- AQ tells how well one withstands adversity and has the ability to surmount it.
- AQ predicts who will overcome adversity and who will be crushed.

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<sup>5</sup> Adversity Quotient, What is AQ? *Op Cit* pg 2

<sup>6</sup> About Adversity Quotient : Retrieved in June, 2008, from [http://peaklearning.com/document/about\\_aq.pdf](http://peaklearning.com/document/about_aq.pdf)

- AQ predicts who will exceed expectations of their performance and potential and who will fall short.
- AQ predicts, who gives up and who prevails.<sup>7</sup>

According to Stoltz, “Some people possess a high IQ and all the aspects of Emotional Intelligence, yet tragically fall short of their potential. Neither IQ nor EQ appear to determine one’s success. Nonetheless, both play a role. The question remains, however, why do some people persist while others— perhaps equally brilliant and well-adjusted—fall short and still others quit? AQ® answers this question.<sup>8</sup>

AQ® takes three forms:

- First, AQ is a new conceptual framework for understanding and enhancing all facets of success: based on research it offers a practical, new combination of knowledge that redefines what it takes to succeed.
- Second, AQ is a measure of how one responds to adversity: it provides to measure, understand and change one’s response to adversity.
- Finally, AQ is a scientifically-grounded set of tools for improving how one responds to adversity.<sup>9</sup>

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<sup>7</sup> Stoltz P.G. Adversity Quotient : Turning Obstacles into Opportunities, United States. John Wiley and Sons, Inc 1997, Pg. 7

<sup>8</sup> Ibid Pg. 13

<sup>9</sup> Ibid Pg. 7

AQ® is comprised of four CO<sub>2</sub>RE dimensions. CO<sub>2</sub>RE is an acronym for the four dimensions of AQ. These four dimensions determine one's overall AQ. They can be described as follows:

**C:** C stands for 'control'. It is the perception of the degree of control; one has over an adverse event. Control begins with the perception that something, anything can be done.

**O<sub>2</sub>:** O<sub>2</sub> stands for 'origin and ownership'. It is the extent to which a person holds himself or herself accountable for improving a situation.

**R:** R stands for 'reach'. It is the perception of how large or far-reaching events will be.

**E:** E stands for 'endurance'. It is the perception of time over which good or bad events and their consequences will last or endure.<sup>10</sup>

### **1.3 NEED OF THE STUDY :**

The researcher is aware of the increasing stress, unhealthy competition and failed expectations, which have become a part of the mundane vocabulary of students. Apart from these individual challenges in the educational sphere, there is an added chaos of other societal adversities—like natural calamities and man-made disasters. For example, the recent 26/11 terror attacks in Mumbai, which spelt insecurity and death for many of us.

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<sup>10</sup> About AQ Profile, Retrieved in January, 2009 from [http://www.peaklearning.com/measuring\\_aq.html](http://www.peaklearning.com/measuring_aq.html)

Amidst this fear, we realized that, what we needed at that time was not mere courage, but courage accompanied with an optimistic rational approach, to deal with the adversity at hand. There were some who panicked and succumbed to the crisis at large, while thanks to few others, who stopped, thought and then fought with the appropriate action, possibly even saving the lives of others. From all these, the researcher realized, how important is the need for improving our Adversity Quotient®. There is a dire need for conducting AQ Programmes to prepare our people to take the lead, and responsibility and develop a power to respond appropriately during adversities, by keeping emotions under check and by taking rational steps to try and improve the situation. Our young children are our tomorrow's citizens and so, the researcher opines that, such AQ enhancement programmes, should be implemented right from the school age to develop more climbers rather than quitters. Hence there is a need to enhance one's AQ.

While reviewing related literature, the researcher also realized that, most of the studies were done in the corporate sector, with very few studies in the field of education and most studies were done abroad with only one research conducted in India, so far. This research partly focused on the study of whether education imparted to students, helped them to face adversities. In this age of increasing adversities, our students have to overcome various obstacles, deal with pressures and hence, the researcher feels that education must involve various programmes and activities that will help students to deal with these adversities and enable them to build personal resiliency, which in return will help the society at large. The researcher therefore, felt the need to move one step ahead and develop a programme for enhancing the AQ® of students, providing them with a weapon and strengthening them to develop an appropriate response to the adversity at hand.

All these aspects motivated the researcher to conduct research in this area. Thus, the researcher felt the need to develop a programme for enhancing the AQ® of students.

#### **1.4 STATEMENT OF THE PROBLEM :**

“DEVELOPMENT OF A PROGRAMME FOR ENHANCING THE ADVERSITY QUOTIENT® OF JUNIOR COLLEGE STUDENTS”.

#### **1.5 VARIABLES OF THE STUDY :**

Variables are the conditions or characteristics that the experimenter manipulates, controls and observes. A concept which can take on a different value is called a variable.

The variables in the present study are discussed below:

- **INDEPENDENT VARIABLE:** Independent Variables are the conditions or characteristics that the experimenter manipulates or controls in his/her attempt to ascertain their relationship to observe phenomenon.

For the present study, ‘**the Programme (Activities)**’ implemented---is the Independent Variable.

- **DEPENDENT VARIABLE:** Dependent Variables are the conditions or characteristics that appear or change as the experimenter introduces, removes or changes the Independent Variable.

For the present study, ‘**Adversity Quotient®**’---is the Dependent Variable.

## 1.6 OPERATIONAL DEFINITION :

Operationally defining the variables is an important step in research, as it helps the researcher to convert the problem precisely into a hypothesis that can be verified or refuted by the experimental data. Therefore, the variables to be studied should be defined in operational terms clearly and unambiguously.

### ➤ ADVERSITY QUOTIENT (AQ):

“Adversity Quotient is the determining factor to check the unconscious pattern in which people respond to adversity or crisis”.--- Paul Stoltz.(1997)

The researcher has adopted the definition of Adversity Quotient from the work done by Paul Stoltz. (Peak Learning.Inc.)

**‘Adversity Quotient, is the sum of the scores obtained on four scales of control, ownership, reach and endurance---which are measured on the AQ profile®.**

**Control:** It measures the degree of control that a person perceives, he/she has over adverse events. It is a strong gauge of resilience and health.

**Ownership:** It measures the extent to which a person holds himself or herself accountable for improving a situation. It is a strong gauge of accountability and likelihood to take action.

**Reach:** It is the perception of how large or far-reaching events will be. It is a strong gauge of perspective burden and stress level.

**Endurance:** It is the perception of time over which good or bad events and their consequences will last or endure. It is a strong gauge of hope or optimism.

AQ is mathematically represented as:

$$C + O_2 + R + E = AQ$$

$$O_2 = O_r + O_w$$

Here C = score on control scale

O = score on ownership scale

O<sub>r</sub> = score on ownership scale (origin)

O<sub>w</sub> = score on ownership scale (ownership)

R = score on reach scale

E = score on endurance scale<sup>11</sup>

➤ **PROGRAMME:**

‘Programme refers to the set of activities developed to enhance the AQ® of students, having their active involvement in its implementation.

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<sup>11</sup> Stoltz, P. G. Adversity Quotient : Turning Obstacles into Opportunities, United States. John Wiley and Sons, Inc 1997, Pg. 100

➤ **EFFECTIVENESS OF THE PROGRAMME:**

Gain in the post-test scores of AQ®.

**1.7 OBJECTIVES OF THE STUDY :**

- To develop the programme for enhancing the AQ® of junior college students.
- To study the effectiveness of the developed programme.

**1.8 HYPOTHESIS :**

Hypothesis is a conjectured statement that implies or states a relationship between two or more variables. Hypothesis is formulated only as the suggested solution to the problem, with the objective that the ensuing study may lead either to its rejection or to its retention. Hypothesis is usually formed from facts already known or research already carried out and is expressed in such a way that it can be tested or appraised as a generalization about a phenomenon.

There are two types of Hypothesis, namely,

- Research Hypothesis
- Null Hypothesis

For the present experimental study, the researcher has formulated the following Null Hypothesis:

- There will be no significant difference in the post-test means of AQ®, of junior college students, of the Experimental and Control group.

## **1.9 SCOPE AND LIMITATIONS :**

- The study is conducted on only one class of XI Commerce, of two English medium colleges, namely, Thomas Baptista Junior College and Vartak College of Vasai Taluka, District Thane.
- The study is limited to the extent of the AQ® scores, as per the AQ profile®, measured by using a paper-pencil test.

## **1.10 EDUCATIONAL SIGNIFICANCE :**

The present research focuses on investigating the variables, Adversity Quotient®, and effectiveness of the developed Programme. This study and its various findings put forward various educational implications which can be implemented by students, teachers and other personnel involved in the process of educating children.

- It will enable teachers to help their students to develop better ability to handle adversities and crisis in their daily lives.
- It will provide an insight to the college management and authorities, on the urgency in the need to organize such seminars and workshops to develop the all-round skills of students in order to be able to handle adversities that continuously surround them in today's stress busted times.
- It will also stress on the need to appoint counselors in colleges and help the counselors to enable the students to know their weaknesses and develop them into their strengths by providing them vocational, educational and personal guidance.

- The present study will also benefit the curriculum developers, and enable them to modify the current syllabus of our junior colleges, focusing on the importance of subjects like Disaster Management, Sex Education, Personality Development, to help them face adversities better and provide better learning experiences through curricular and co-curricular efforts.
- The researcher feels that the present study will also help parents to understand the challenges faced by children today and thereby understand them and encourage them to develop better resilience during difficult times.

## **CHAPTER : 2**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 INTRODUCTION:**

One of the most important early steps in any research project is conducting the REVIEW OF RELATED LITERATURE. A literature review discusses published information in a particular subject area within a certain time period.

According to Lokesh Kaul, “Research takes advantage of the knowledge which has been accumulated in the past, as a result of constant human endeavour. It can never be undertaken in isolation of the work that has already been done on the problems which are directly or indirectly related to the study proposed by the researcher.” Therefore, a review of the related literature must precede any well planned research study.

The purpose of the review includes the following:

1. The review of related literature enables the researcher to define the limits of his study.
2. It helps the researcher to avoid unfruitful and useless problem areas.
3. It helps the researcher to avoid unintentional duplication of well established findings.
4. It helps the researcher to get an understanding of the appropriate research methodology to be used for the study.

5. It gives the researcher, knowledge about the recommendations of previous researches listed in the study for further research.<sup>1</sup>

Thus, for the present study, the researcher reviewed literature that was plainly relevant, competently executed and clearly reported, in order to acquire knowledge of the various studies that have been conducted on ADVERSITY QUOTIENT. This enabled the researcher to propose a unique study, different from those done formerly.

The researcher reviewed related literature through primary and secondary sources. The following sources were used to review related literature:

- Review of Researches
- Journals
- Dissertations
- Computer databases

For the present study, the review has been categorized into two parts, based on studies done in India and studies done abroad. The studies are presented in a reverse chronological order.

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<sup>1</sup> Koul,L. (2007) Methodology of Educational Research (3<sup>rd</sup> ed.). New Delhi : Vikas Publishing House Pvt. Ltd. Pg. 89

## **2.2 STUDIES CONDUCTED IN INDIA :**

Adversity Quotient is a relatively new concept in India and the researcher could locate only one study, on Adversity Quotient done in India. (This is to the best of the researcher's knowledge). Hence, the researcher has presented only one study conducted on Adversity Quotient, in India.

**A study on “The Relationship Between Adversity Quotient, School Performance And School Climate” was carried out by D'souza, Roschelle P. (2006)**

The study focused on ascertaining the relationship between the variables, namely, AQ, school performance and school climate and comparing the AQ and performance of different school types namely of, SSC, ICSE and CBSE boards. The sample comprised of standard-IX students from English medium schools of greater Mumbai. The sample was stratified and the schools were selected randomly. The researcher used tools like ‘Student Performa’ designed by the researcher herself to collect student's personal details and also the marks obtained at the last terminal examination to assess school performance. The ‘ARP’ (Stoltz,1997) was used to measure AQ of students and ‘the organizational climate scale’(Pethe. S, Chaudhari. S, Dhar. U, 2001) to measure student's perception of school climate.

Findings revealed that: There was a significant difference in the AQ of SSC, ICSE and CBSE school students and the students from ICSE and CBSE school types showed better ability to handle adversities than SSC school students. It also indicated that students with low AQ, irrespective of their school type responded in a similar manner to adverse situations. There was a positive correlation between AQ and school performance, implying that an

increase in AQ scores will increase school performance scores, also indicating that an increase in the ability to handle adversities corresponds to better performance<sup>2</sup>.

## **2.3 STUDIES CONDUCTED ABROAD:**

The researcher located the following studies on Adversity Quotient conducted abroad:

A study on ‘**Adversity Quotient Levels Of Female Grade School Teachers Of A Public And Private School In Rizal Province**’ was carried out by **Villaver, Elaine Lucero (2005)**

The main focus of the study was to examine the significant differences in AQ levels of female grade school teachers of public and private school. The study included 105 female grade school teachers, 74 from a public school and 31 from a private school, in Rizal province. The ARP 7.0 was used to measure the AQ levels of teacher respondents. The Z-test, statistical method was used to determine the significant difference between AQ levels of teacher respondents. Findings concerning AQ revealed that majority of the respondents falling under early adulthood stage possess moderate AQ, while their older counterparts possess moderately low AQ. Respondents who are single, were found to have equal percentages for moderate and moderately low AQ, while majority of married respondents possess moderate AQ level. Findings regarding socio-economic status (SES) indicate that majority of respondents belonging in

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<sup>2</sup> D’Souza, R. P. (2006). “A Study of Adversity Quotient of Secondary School Students in Relation to their School Performance and School Climate” Retrieved in June, 2008 from [http://peaklearning.com/grp\\_research.html](http://peaklearning.com/grp_research.html)

lower SES have moderate AQ level, while those in middle class of SES show majority of concentration within moderately low AQ level. Finally, it was discovered that no significant difference exists between adversity quotient level of public and private, female grade school teachers<sup>3</sup>.

A study on **‘Adversity And Obstacles In The Shaping Of Prominent Leaders: A Hermeneutic Phenomenological Inquiry’** was conducted by **Haller, Howard Edward (2005)**

The study was conducted on nine primary participants, two were then current U.S Senators, a retired U.S Army Special Forces Major General, a President of a large educational foundation, who previously was Chancellor of one major University and President of another, a well-known Author and motivational speaker, and the Chairman and Chief Executive Officers of four major companies. The primary participants selected for the study prior to becoming prominent leaders had experienced various degrees of adversity in their youth and adult lives. These participants were interviewed to collect data. The results indicated that the adversity in the participants’ early lives was not the most important influence and they viewed the obstacles or adversities they faced in their adult lives, as challenges which could be changed into opportunities. The findings also revealed that overcoming challenges or obstacles strengthened and motivated the leaders<sup>4</sup>.

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<sup>3</sup> Villaver, E. (2005). “Adversity Quotient levels of Female Grade School Teachers of a Public and a Private School” (Abstract) Retrieved in June, 2008, from [http://peaklearning.com/grp\\_research.html](http://peaklearning.com/grp_research.html)

<sup>4</sup> Haller, H.E. (2005). “Adversity and Obstacles in the shaping of prominent leaders: A Hermeneutic Phenomenological Inquiry” Retrieved in June, 2008, from [http://peaklearning.com/grp\\_research.html](http://peaklearning.com/grp_research.html)

**An AQ Performance Study** was carried out at **Bellsouth (2005)**.

The main objective of the study was to turn around sales, performance and customer service by equipping associates and their leaders to respond more effectively to all forms of adversity, challenges and obstacles. The study was conducted on a sample of 76 sales associates and AQ training was conducted for the outbound sales call center, during September 2004. The analysis was based on the quantitative-revenue outcomes and the qualitative-leader and employee feedback, following the Programme. The quantitative results of the study indicated that AQ correlated with performance and sales, showing an increase in revenue and the attrition was 25% lower among those who completed the Programme, compared to those who did not. The qualitative results suggested an improved overall engagement in work and peer accountability, better attitude towards change and an improved morale, energy and optimism<sup>5</sup>.

A study on **‘Optimism, Adversity And Performance: Comparing Explanatory Style And AQ’** was carried out by **Johnson, Monica Brannon (2005)**

The purpose of this study was to compare explanatory style to AQ and see if there was any conceptual overlap. 112 employees of the western area sales region of a leading fortune 500 company in computer hardware, was used to gather data for this study. The ‘ASQ- attributional style questionnaire’ by (Peterson, 1982) was used to measure explanatory style and the ARP (Stoltz, 2000) was used to measure AQ. The findings suggested that there was a

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<sup>5</sup> Bell South (2005) Measuring AQ Performance Studies Retrieved in June, 2008, from [http://peaklearning.com/grp\\_research.html](http://peaklearning.com/grp_research.html)

significant correlation between explanatory style and AQ, with locus of control being the most important element linking the two models together. The findings also revealed that there was a significant relationship between AQ and performance for short term employees and the higher a salesperson's AQ, the better he performed <sup>6</sup>.

**A study on 'Adversity Quotient And The Performance Level Of Selected Middle Managers Of The Different Departments Of The City Of Manila As Revealed By The 360-Degree Feedback System' was conducted by Lazaro-Capones, Antonette R. (2004)**

The main purpose of the study was to determine the relationship between the two variables. The study employed the descriptive, co-relational method of research. The research involved 102 middle managers from 7 departments of the City of Manila. The findings of the study provided evidence for the relationship between Adversity Quotient and Performance ratings as revealed by the 360- degree feedback system. The findings also revealed that most of the respondents had moderate and high AQ <sup>7</sup>.

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<sup>6</sup> Johnson, M. B. (2005). "Optimism, Adversity and Performance: Comparing Explanatory Style and AQ" Retrieved in June, 2008, from [http://peaklearning.com/grp\\_research.html](http://peaklearning.com/grp_research.html)

<sup>7</sup> Lazaro-Capones, A.R. (2004). "Adversity Quotient and the Performance Level of Selected Middle Managers of the Different Departments of the City of Manila as Revealed by the 360-degree Feedback System" Retrieved in June, 2008, from [http://peaklearning.com/grp\\_research.html](http://peaklearning.com/grp_research.html)

**An AQ Performance Study** was carried out at **Sun Microsystems (2004)**.

The main aim of this study was to examine if AQ or its CORE dimensions predicted sales performance in adverse times and to what extent could the AQ training improve AQ scores, also to study if any relationship existed between improvement in AQ and overall performance. The sample was comprised of 120 account executives and sales managers from the Western Area of the United States. AQ was measured twice—during the one-day AQ Programme and 90 days after the Programme. Performance was measured in two ways, namely- by sales as a percentage of quota and by a general performance rating scale used through SUN. The findings revealed that AQ remains a robust predictor and driver of performance and sales resilience and that AQ training substantially improved overall AQ scores and CORE profile and the findings also suggested that AQ helped drive sales results, especially in demanding markets/industries <sup>8</sup>.

A study on **AQ Performance** was conducted in **Major Global Technology Company (2004)**.

The study was conducted on 151 senior and executive level leaders. The purpose of the study was to measure several variables, namely, AQ, perceived stress, level of engagement, perceived control and one's ability to cope with adversity. A one day Programme was conducted followed by a 90-day, weekly web-based AQ reinforcement Programme. The results of the study

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<sup>8</sup> Sun Microsystems (2004) Measuring AQ Performance Studies Retrieved in June, 2008, from [http://peaklearning.com/grp\\_research.html](http://peaklearning.com/grp_research.html)

revealed that an increase in the mean AQ scores for the group rose from 151.9 to a 168.5. It also indicated significant correlation between one or more of the CORE dimensions of AQ and decrease in stress on the job, coping with adversity, stress management, control over factors that affect stress, stress associated with greater challenge<sup>9</sup>.

A study on **‘The Relationship Between Principal Response To Adversity And Student Achievement’** was carried out by **Williams, Mark W. (2003)**

The research mainly focused on the relationship between Principal’s response to educational adversity and its impact on student achievement. Participants in this study included all 17 Principals and 79 teachers from the Flagstaff Unified School District of Arizona. The primary data was collected through interviews and the secondary data was taken from published standardized student test scores. The ARP was administered to measure individual response to adversity. The findings revealed that students attained higher achievement scores in schools with principals with high AQ. It also revealed that the principals’ response to adversity did not positively correlate with teacher response to adversity. However the teachers’ perceived control over their work environment influenced principal/teacher relationships and student achievement<sup>10</sup>.

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<sup>9</sup> Major global technology (2004) Measuring AQ Performance Studies Retrieved in June, 2008, from [http://peaklearning.com/grp\\_research.html](http://peaklearning.com/grp_research.html)

<sup>10</sup> Williams, M. W. (2003) “The Relationship between Principal Response to Adversity and Student Achievement” Retrieved in June, 2008, from [http://peaklearning.com/grp\\_research.html](http://peaklearning.com/grp_research.html)

A study on ‘**Adversity Quotient: The Role Of Personal Bounce-Back Ability In New Venture Formation**’ was carried out by **Markman, Gideon D. (2000)**

This study assessed the Adversity Quotient of 199 patent inventors. The ARP(stlotz,1997) was administered to assess AQ of the participants. To assess demographic variability and to provide sample control, additional items were included in the questionnaire, which were selected for use in this study on the basis of the results of a pilot study (Baron & Markman, 2000). The findings revealed that AQ, particularly with respect to perceived control over adversities and perceived ownership over the outcomes of adversities, reliably differentiated between technical inventors who build new organizations and those who merely work for these organizations. The study reveals that technical entrepreneurs as compared with technical non-entrepreneurs, experience significantly higher levels of perceived control and accountability. The study also reveals that high AQ is associated with higher personal earnings and that, the higher the patent inventors’ AQ- which is an acquirable skill- the more financially successful they were <sup>11</sup>.

## **2.4 CONCLUSION:**

Through the review of related literature, the researcher realized that most of the studies conducted on ADVERSITY QUOTIENT were done abroad with only one study found that was conducted in India.

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<sup>11</sup> Markman, G. D. (2000). “ Adversity Quotient : The Role of Personal bounce-back ability in new venture formation” Retrieved in June, 2008, from [http://peaklearning.com/grp\\_research.html](http://peaklearning.com/grp_research.html)

This indicated the need to conduct more studies in India, as adversities are faced worldwide and with specially considering the recent adversities that India is facing continuously. The review of literature also indicated that most of the studies were conducted in the corporate sector, with regard to the study of AQ® and performance, and only two studies were done in the educational field and hence the researcher realized the need and importance of the study of AQ® in the educational field.

Most importantly the researcher realized that no such research study was done in the educational field to develop a Programme for the enhancement of AQ®, and hence the researcher felt that, this would be an exclusive study with regard to the unique topic chosen by her and understanding the urgency in the need of such AQ enhancement Programme to be implemented in the educational field. Considering all these factors, the researcher got motivated to conduct the present study.

# **CHAPTER : 3**

## **RESEARCH DESIGN**

### **3.1 INTRODUCTION :**

Research is an essential and powerful tool in leading man towards progress. Scientific research leads to progress in various fields of life. New products, new facts, new concepts and new ways of doing things are being found due to over increasing significance of research in physical, biological, social and psychological fields.

In any research, the steps that are followed in reaching the solution to the problem are:

- To define the problem in concrete terms.
- Choice of the subject of investigation.
- Validation of data gathering tools.
- Collection, analysis and interpretation of data.
- Process of drawing inferences and conclusions.

### **3.2 RESEARCH DESIGN:**

A research design is a path that shows direction to complete the research study effectively. A good research design is one, where the optimum

research procedures are used with minimum practical constraints. Developing an ideal research design, involves selection of an appropriate statistics model to accomplish the research study meaningfully. It involves collection of data, its analysis and logical routing of the research towards reliable conclusions and findings.

Research study is generally done so that a rational approach could be used for the subject of study. Every research is systematic and logical step bound activity that is carried out in stages. The purpose, objective of the study and need determines the method chosen for the study.

### **3.3 RESEARCH METHODS :**

Research methods are of utmost importance in any research process. They describe the various steps of plan through which the problem could be studied and the solution could be thereby reached.

There are three basic methods in which research can be conducted. They are:

- Historical method
- Descriptive method
- Experimental method

**1. Historical method:** It is a method of investigation used to discover, describe and interpret what existed in the past. The main purpose of historical research, therefore, is to arrive at an accurate account of the past, so as to gain a clearer perspective of the present.

**2. Descriptive method:** Descriptive research studies are designed to obtain pertinent and precise information concerning the current status of a

phenomena and whenever possible to draw valid general conclusions from the facts discovered. Descriptive research method determines and reports the way things are. Because of its ease and directness, Descriptive method has undoubtedly been the most popular and most widely used research method in education. It involves typically collecting data through questionnaire, survey, interviews or observations.

- 3. Experimental method:** Experimental research method is the one, where the ‘cause’ is manipulated. It is the only type of research that can truly establish cause-effect relationship. In experimental method, the researcher defines a problem and proposes a tentative answer or hypothesis. He tests the hypothesis and accepts or rejects it in the light of the controlled variable relationship that he has observed. There are four essential characteristics of experimental research. They are: Control, Manipulation, Observation and Replication.

An experimental research can be conducted using the experimental designs, which can be classified as follows:

- Pre-experimental research design.
- True experimental research design.
- Quasi experimental research design.
- Time series experimental research design.
- Factorial experimental research design.

Each of the five classes of experimental research design caters to different types of samples. Each class of design attacks a different problem under

study and different variables under study. The design is suited to the requirements of the experimenter. Each design has its own merits and demerits. The degree of accuracy depends upon the lines of control, manipulation and replication.

The present study deals with the effectiveness of the Programme, for enhancing the Adversity Quotient (AQ)<sup>®</sup> of junior college students. The researcher aims to find out if the activities developed by her, result in the enhancement of the students' AQ<sup>®</sup> or not. Therefore, the researcher found it suitable to use experimental method.

For the present study, the researcher has used a Quasi Experimental Research Design and in it the 'Pre-test, Post-test Non-Equivalent Group Design' is chosen. It can be shown as:

$O_1 \quad X \quad O_2$

$O_3 \quad C \quad O_4$

Where  $O_1 \quad O_3 =$  pre-tests

$O_2 \quad O_4 =$  post-tests

This design is often used in classroom experiments, when experimental and control groups are such naturally assembled groups as intact classes, which may be similar. In this design, the researcher has two groups namely, the Experimental group and the Control group. Pre-tests are administered to both the groups and then the experimental treatment is administered to the Experimental group, following which post-tests are given to both the groups. The difference between the pre-test and post-test scores are compared with the

help of appropriate statistical tests to ascertain the effect of the independent variable (X).

### **3.4 SAMPLING:**

Sampling is the process by which a relatively small number of individuals or objects or units are selected and analysed in order to find out something about the entire population, from which it is selected.

The representative proportion of the population is called a sample. The sample chosen should ideally serve the purpose and need of the study. It must be chosen according to the nature of the study. To make the research study realistic and feasible, it is most important to choose an appropriate sample that has the most representative quality of the wider population.

The inferences drawn and generalizations made from such samples are then considered valid, as they can also be applied to the population world.

#### **Types of Sampling:**

Sampling can be classified into two broad categories:

- Non-Probability Sampling
- Probability Sampling

**Non-Probability Sampling:** In this sampling type, the units are selected at the discretion of the researcher. It is therefore also called as Purposive or Judgement sample.

**Probability Sampling:** In this sampling type, the units of the population are not selected at the discretion of the researcher but by means of certain fixed procedures and thus ensure that every unit of the population has the probability of being chosen as the sample.

For the present study, the researcher has used Non-Probability type of sampling technique in which the Incidental Sampling has been chosen. This technique was implemented with respect to the feasibility and availability of students for the longer duration of time, for which the researcher has to depend on the permission of the head authority of the college, to conduct the research activity in their college.

A sample of 50 students in each group, namely 50 students in Experimental group and 50 students in Control group, have been chosen from ‘Thomas Baptista Junior College’ and ‘Vartak College’ from Vasai Taluka, District Thane, respectively.

### **3.5 DATA GATHERING TOOLS:**

The researcher requires many data gathering tools or techniques, which may vary in their complexity, design, administration and interpretation. The researcher sometimes has to select from the available tools, the appropriate one which will provide the data, she seeks for testing

hypothesis or sometimes the researcher has to construct her own tools, if the existing tools do not satisfy the purpose of her study.

The researcher has thereby, used the following tool for her study:

**THE ADVERSITY RESPONSE PROFILE® :( Stoltz,1997)**

The Adversity Response Profile(ARP)®, is a self rating questionnaire, with a 5 point bipolar scale, which is designed by Dr. Paul Stoltz of PEAK Learning, Inc., to measure an individual's style of responding to adverse situation.

The ARP® describes fourteen scenarios, only ten of which are actually scored. Each scenario is followed by four questions. Answers of each are scored on a different scale. There are therefore four scales of ten questions each. The sum of the four scales gives a person's Adversity Quotient. The four scales of AQ are Control, Ownership, Reach and Endurance. Each of these scale measures a different aspect of AQ, and the score on each scale of the ARP® can range from 10 to 50, while the total AQ scores can range from 40 to 200.

**Reliability of the tool:**

The AQ score and all four sub-scores were found to have high reliabilities by the author. The Cronbach's co-efficient alphas---a measure of the internal- consistency reliability of each scale score, estimated by the author are stated below:

**Coefficient Alpha Reliabilities ( N=837 )**

<b>Scale</b>	<b><math>\alpha</math></b>
<b>Control</b>	<b>0.77</b>
<b>Ownership</b>	<b>0.78</b>
<b>Reach</b>	<b>0.83</b>
<b>Endurance</b>	<b>0.86</b>
<b>AQ</b>	<b>0.86</b>

**Tool Interpretation:**

An individual with a score greater than 149 is considered to have high AQ whereas, below 120 is considered to have low AQ. An individual with a score, between 120 and 149 is said to have moderate AQ.<sup>1</sup>

**3.6 DATA ANALYSIS:**

Data Analysis usually involves, application of one or more statistical techniques. The data is analysed in a way that permits the researcher to test the research hypothesis or answer the research questions.

For the present study, the researcher has used the ‘ANCOVA’ statistical technique, to analyse the data. ANCOVA (Analysis of Co-Variance) represents an extension of the ‘Analysis of Variance’, that tests

the significance of difference between means of final experimental data by taking into account the correlation between the dependent variable and one or more co-variates or pertinent control variables, by adjusting initial mean differences in the groups. It is especially useful to the researcher, when for various reasons it is not possible or is quite difficult to equate experimental and control group or some pertinent variable at the start of the experiment.

### **3.7 CONCLUSION:**

The research design is an important step in the research process. A good design ensures that the goal of the study is met. The researcher aims to achieve the goal of this study i.e. “Development of a programme, to enhance the post test scores of AQ, of junior college students”, by using the research design described in this chapter.

# **CHAPTER : 4**

## **DEVELOPMENT AND IMPLEMENTATION OF ACTIVITIES.**

### **4.1 INTRODUCTION :**

Adversity Quotient is the need of the hour. The economic crisis faced world over and terrorism looming high over us, are a reminder of the need to have a high AQ. Even our young students are facing an increasing number of adversities.

According to a nationwide survey, in the U.S, the top problems reported by teachers in 1940 were these---talking out of turn, making noise, running in the halls, cutting in line, dress code violations, lingering and chewing gum, whereas in 1990, the top problems reported by teachers were as follows---drug abuse, alcohol abuse, pregnancy, suicide, rape, robbery and assault.<sup>1</sup> Comparing the results of these two surveys, it shows the massive difference in the degree of challenges faced by students through the increasing years. India, also has a similar situation, with regard to the increasing amount of challenges faced by students.

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<sup>1</sup> Stoltz,P.G. Adversity Quotient : Turning Obstacles into Opportunities, United States. John Wiley and Sons, Inc 1997, Pg. 42

Our young children or students are not exempted from the rat-race of unhealthy competition, challenges to seek admissions in desired courses, increasing expenses of education, rising parameters of success, increasing peer pressure and unfavourable educational environment etc...Hence the researcher feels that, there is an emerging need for AQ Programmes to be conducted, which can help our students to rise, take the responsibility and fight against the adversities at hand.

## **4.2 PHILOSOPHICAL BASIS OF THE PROGRAMME :**

The recent bitter experiences that we faced in India, especially the 26/11 attacks on Mumbai, taught us one lesson that, sometimes it takes, not just one but rather a handful of us, to come together and take a lead in trying to overcome harsh circumstances. It showed how we needed to have an approach of solidarity and even mindedness to think of ways to fight out those adversities. Hence, the researcher opines that AQ needs to be risen at a mass level. AQ Programmes at a group level thereby enable the entire group to strengthen up to a similar mindset of thinking logically and not giving up easily, and developing a greater ability to fight adversities.

It presses the ideology of the known Sanskrit shlok, “OM...SAHANAVAVATU...SAHANAU BHUNAKTU, SAHAVIRYA KARVA VAHE, TEJASVINA ...VADHITAMASTU, MA VIDVISHA MAHE OM...SHANTI...SHANTI...SHANTI..”, which means that... ‘ let us come together, come united... to develop the strength to understand each other and bring peace’. At present, the whole world is facing economic adversities. The rise of religious intolerance, fanaticism has kept terrorism hovering over us. Our life has become extra-burdened with these societal adversities, and therefore the researcher feels that, instead of fighting over our differences, now

there is a need to come together as one family and think over ways in which we can deal with these differences and develop the long stressed ideology of 'VASUDAIVA KUTUMBKAM'--- literally meaning 'the world as one family'.

Amidst all chaos, of the natural as well as man-made adversities that we are facing, there is a need to develop a high AQ culture. There is a need to enhance the ability to live together in harmony despite all differences.

Pondering over similar issues, the UNESCO report based on Jacques Delor's report on, 'LEARNING : THE TREASURE WITHIN' suggested that our education should aim at all-round development of a child's personality by rebuilding it around the 'FOUR PILLARS OF EDUCATION' ---namely, 'learning to know', 'learning to do', 'learning to live together', and 'learning to be'. It has especially put greater emphasis on the third pillar, '**learning to live together**'.<sup>1</sup> Looking at the increasing tensions and crisis in the world society, it stressed on 'learning to live together', by developing an understanding of other people and carrying out joint projects for learning to manage conflicts or crisis.<sup>2</sup>

With this philosophical base in mind, the researcher has developed the Programme to enhance the AQ® of the group of students---so that together they can come to fight over the adversities they face, rather than being a dumb audience to them.

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<sup>2</sup> UNESCO REPORT : LEARNING THE TREASURE WITHIN, Report to UNESCO, International Commission of education for the Twenty first Century(Monograph). Delhi : CBSE.

### **4.3 TERMINAL BEHAVIOUR OF STUDENTS :**

At the end of the implementation of the activities, the researcher expects to bring out a marked improvement in the way students respond to adversities, thereby to see an enhanced AQ of the students.

### **4.4 DEVELOPMENT OF ACTIVITIES:**

The activities have been developed by the researcher, keeping in mind the objectives framed for developing the four dimensions ---namely, ownership, control, endurance and reach, to enhance AQ® of students. The rationale behind each activity is specified as under:

#### **ACTIVITY: 1**

**Name of the activity: Don't Quit**

#### **Objectives:**

1. To enable students to develop endurance skills during adversities.
2. To enable students to develop control during adversities.

#### **Rationale:**

‘Don't Quit’ is a group activity. It is based on the ideology of constructivism, reciprocal teaching approach. This approach helps students to understand the significance of the poem on their own and also to explain it with the help of personal experiences. Such self-exploration helps the students to get to its core and imbibe the feelings evoked, deep within themselves. The poem ‘Don't Quit’ motivates the students to face the odds in life, bringing out its clear picture, full of ups and downs and yet how the goal can be difficult but not impossible.

## **ACTIVITY: 2**

**Name of the activity: Idol Inspiration**

**Objectives:**

1. To enable students to develop accountability and ownership in life.
2. To enable students to limit the reach of adversity in other areas of life.

**Rationale:**

‘Idol Inspiration’ is a group activity. Basically, it is the zest of the biographies of some real life heroes like Helen Keller, Lance Armstrong, etc...Reading the biographies of such great people helps to provide tremendous inspiration and inner strength to imbibe their positive powers. With this point in mind, students get encouraged, to build up determination, perseverance and a rational outlook towards overwhelming difficulties in life. It helps students to build up strategies to overcome the difficulties, one at a time.

## **ACTIVITY: 3**

**Name of the activity: Workshop (Rational Emotive Therapy)**

**Objectives:**

1. To enable students to develop ownership during adversities.
2. To enable students to develop endurance skills during adversities.

**Rationale:**

A workshop on RET ( Rational Emotive Therapy ) is an activity, which in itself is a wonderful therapy to help the students to tackle day to day problems and reduce anxieties of life, as prepared by world famous psychiatrist, Dr. Albert Ellis. Our emotions are responsible for our behaviour and therefore rationalizing them helps in shaping our behaviour. This is very important at the time of adversities. Similarly, this session teaches students how to face various problems courageously by rationalizing their feelings. They are empowered with a dose of optimism and confidence and encouraged to rise like a phoenix from the ashes of failure and fight over life's biggest obstacles.

**ACTIVITY: 4****Name of the activity: Fight Bravely****Objectives:**

1. To enable students to limit the reach of adversities over other areas of life.
2. To enable students to develop endurance in difficult times.

**Rationale:**

'Fight Bravely' is a group activity. When adversity strikes, we often respond negatively, based on our state of an emotional outburst, which prevents understanding and retards our confidence. But at the same time, we can calm down and based on the objective evidence and rational thinking, we can develop a

positive response to the adverse situation at hand. This rational thinking helps to analyze the situation, verify its plus and minus points and then think of a positive response to improve the situation. This activity promotes a similar kind of rational approach to be optimistic and fight bravely against the adversity. It helps students to develop an ability to be firm and generate a truthful response to face life boldly against all odds.

### **ACTIVITY: 5**

**Name of the activity: I Lead Myself.**

**Objectives:**

1. To enable students to take ownership of their life and its adverse events.
2. To enable students to develop control over adverse events.
3. To enable students to sustain and endure during adversities.

**Rationale:**

‘I Lead Myself’ is an individual activity, it is basically a worksheet. ‘LEAD’ sequence, originally developed by Dr. Paul Stoltz of PEAK Learning—is based on the notion that we can alter our success by changing our habits of thought. As the adversity strikes, we get alarmed, instead to hold on and think of a solution, helps to develop control over it and also to limit the reach of the adversity in other areas of life. Based on this sequence, the students are provoked or led to formulate their responses and try and reach a solution. It helps students to alter their thought process, thinking logically and gradually developing a positive way of responding to the adversity.

## ACTIVITY: 6

**Name of the activity: Optimistic Imagination.**

**Objectives:**

1. To enable students to develop accountability and ownership during adversities.
2. To enable students to develop endurance skills during adversities.

**Rationale:**

‘Optimistic Imagination’ is a group activity. Imagination is the act of making images that convey through their shapes, form and emotional authority, a power of reality that lies at the heart of things. The fundamental task of imagination in ordinary life is to produce something of which we have a vision and thereby bring it into the realm of possibilities. Through imagination we are able to suspend our own passionately held beliefs and begin to treat them as possibilities and even real options. Imagination here refers to the ability to imagine or plan creatively, to form a mental image of how to act in a particular difficult situation. Suddenly to imagine being in a traumatic phase helps the students to have a deep insight in life, of their strengths and weaknesses and how they can utilize their strengths to fight the obstacles they face. This imaginative exercise enables students to develop a certain readiness to face life along with its uncertainties.

## **ACTIVITY: 7**

**Name of the activity: Dramatization**

**Objectives:**

1. To help students to develop endurance in adverse situations.
2. To help students to gain control over adverse situations.

**Rationale:**

Dramatization is a presentation of events through the dialogue, actions and expressions of the characters. It is a group activity. The objective is to develop a preparedness to act and take initiative during adversities. It helps to develop a realistic approach to deal with difficult realities of life. It is as good as watching a movie, just that, here the characters are enacting the scene right in front of the students in their class. This activity provides an emotionally enriching experience, which appeals and has a lasting impact on the student's minds. They are able to empathize with the characters and identify the situations they are facing. Thus, it helps to develop the ability to face disasters and acquire the skills of taking action and minimize the panic, during the actual occurrence of adversities in their life.

## **ACTIVITY: 8**

**Name of the activity: Story Writing**

**Objectives:**

1. To enable students to restrict the reach of adversity in other areas of life.
2. To enable students to develop ownership and accountability to take action during adversities.

**Rationale:**

‘Story Writing’ is a group activity. In the process of writing or completing the story, the students are enabled to come up with new ideas of overcoming adversities. The thought process helps to lead them to think of strategies and means for fighting the obstacles occurring in the story given. Thinking in groups, they are able to come up with various ways of gathering resources and taking actions, if they are to fight with similar adversities in their own lives or of their near ones. It thus strengthens their ability to respond in a better way to the adversities, henceforth.

## **ACTIVITY: 9**

**Name of the activity: Learning By Seeing.**

**Objectives:**

1. To help students to develop endurance skills during adversities.
2. To help students to gain control during adversities.

**Rationale:**

‘Learning By Seeing’ is an activity which caters to the students, by creating a powerful Audio-visual impact. While watching the movie, the students are enabled to empathize with the characters and get a vicarious experience of the traumatic situation they are in. This creates a lasting impact on the minds of the viewers ie, the students and helps them to have a strong remembrance of certain important qualities and also necessary steps to be taken during such extreme adversities in life.

**ACTIVITY: 10****Name of the activity: Role Play****Objectives:**

1. To help students to develop control over adverse situations.
2. To enable students to develop accountability and gain ownership in adversities.

**Rationale:**

‘Role Play’ is a group activity. Its main objective is to enable the students to visualize the situation differently. Role playing technique helps to provide a mock demo of the real adverse situation occurring in our lives. Thus while acting in response to the adversity, students get a first hand experience of how to deal with difficult situations, which is very important. It assists students to evaluate the conditions in the mock adverse situation and take up responsibility to act appropriately. Here, Role-Play is a controlled experiential learning that takes

the students just one step before the actual real life situation. Hence, this activity is helpful to bridge the gap between what we say or seem to think about an event and what we, actually do in that particular event. Students are sensitized to the challenging situation and get to learn about the complexities involved in real life adversities. It thereby, develops the emotions of respect towards such personalities who tackle difficult situations skillfully.

## **ACTIVITY: 11**

**Name of the activity: Hero Worship**

**Objectives:**

1. To enable the students to take accountability during crisis.
2. To enable students to develop control during adversity.

**Rationale:**

‘Hero Worship’ is an individual activity. The students in the research activity are adolescents. Adolescents tend to hero worship. Often they worship movie stars--- their habits, style, their body etc... In a similar way, meeting a hero, who in real life has faced adversity and has overcome his difficulties jubilantly, helps the students to get a good learning experience. They try to imitate his courage and grit or determination to fight various obstacles in order to endure through the crisis. It provides them with an example of a real person, a real life hero, who has been through extraordinary circumstances and hence they could follow his footsteps.

## **ACTIVITY: 12**

**Name of the activity: Learn From True Experiences.**

**Objectives:**

1. To enable students to develop the ability to limit the reach of adversity.
2. To enable the students to develop endurance skills during adversities.

**Rationale:**

‘Learn From True Experiences’ is a self-study group activity. Interviewing people personally, gives a chance to understand their experiences clearly. It is like ‘getting it straight from the horse’s mouth’. This direct experience of the adversities they faced and how they responded to it, helps to boost the confidence level of students. They are able to ask and clear their queries, if any, and it helps them to tackle difficult situations in their own lives. It also provides an empathetic support, that not only they, but there are several others who have had worst adversities, yet were able to overcome their difficulties.

## **ACTIVITY: 13**

**Name of the activity: Collecting Articles, Reports.**

**Objectives:**

1. To enable students to develop endurance skills during adversities.
2. To enable students to develop the ability to limit the reach of adversity.

**Rationale:**

‘Collecting Articles, reports...’ is a group activity. Reading newspapers, magazines helps students to be aware of different adverse situations that people have been facing world over, and also especially in India. They also become aware of how various people have bravely responded in a crisis or how even after having faced the trauma, they have overwhelmingly come out of it. This activity of collecting information or articles related to adversities helps students to take a due course of action during sudden crisis and not let the adverse situation overpower them.

**ACTIVITY: 14****Name of the activity: Song Of Determination****Objectives:**

1. To enable students to think over ideas and limit the reach of the adversity.
2. To enable students to develop endurance during adversities.

**Rationale:**

‘Song Of Determination’ is a group activity. Students are well aware of the recent adversities faced by our country. Thinking of various ways or means to get over these difficult situations and planning strategies to fight these adversities, helps to inculcate the habit of thinking and finally taking relevant action, to get over them. The theme of the song ‘Hum honge kamayaab’ also encourages the students to be determined to win and not give up easily. It also

promotes solidarity and the idea of how we can be united in our efforts and fight societal adversities. It suggests the idea that, rather than being a mere dumb audience to the adversities occurring, we must try to do something to get over them.

## **ACTIVITY: 15**

**Name of the activity: Crossword Puzzle.**

### **Objectives:**

1. To enable students to understand the qualities that play an important role to develop the four dimensions of AQ
2. To enable students to know the importance of these qualities, determining and relating to the four dimensions of AQ

### **Rationale:**

‘Crossword Puzzle’ is a group activity. Crossword involves construction of words with the help of clues provided. Crossword is often contrived as a form of entertainment and as an aid to develop vocabulary. But here, the researcher has used it as a gaming technique, to derive the qualities essential for developing AQ. The clues provided, give meaning of the words to be constructed and hence each meaningful word formed, strikes in the minds of the students, reminding them to instill these qualities in themselves.

#### **4.5 IMPLEMENTATION OF THE ACTIVITIES:**

1. The researcher used INCIDENTAL SAMPLING technique, as the implementation of activities would require the availability of students for a longer duration and the researcher would have to depend on the permission of the head authorities of colleges, to conduct research activities in their college.
2. The researcher obtained a sample of 50 students in each group, namely 50 in experimental group and 50 in control group.
3. The researcher sought permission of the senior personnel i.e. The principal and the vice-principal, of Thomas Baptista Junior college and Vartak College in Vasai Taluka, before carrying out the activities and due assurance was given to them that regular classes would not be disturbed.
4. The 15 activities were implemented, using 24 lecture periods, each of 45 minutes duration, keeping a gap of one day between the implementation of each activity.
5. Before starting with the activities, the researcher administered the pre- test using the AQ profile®. Pre-test was administered in both groups. This exercise was carried out to gain an insight on the existing AQ® of the students.
6. Activities were implemented on the experimental group, but no activities were implemented on the control group.
7. Prior to the implementation of each activity in experimental group, the researcher explained the procedure to the students, so as to make them understand the expectations from them regarding the activity.

8. After completion of all the activities, the post-test was administered to both the groups.
9. The researcher observed the students behaviour, during and after implementation of activities, regularly.
10. Scores of AQ were obtained from PEAK LEARNING for both, pre-test and post-test of both groups and further statistical calculations were performed.

# **CHAPTER : 5**

## **ANALYSIS OF DATA**

### **5.1 INTRODUCTION:**

The data collected through the administration of various tools on selected samples are raw. This data needs to be tabulated, organized, analyzed and interpreted for drawing sound conclusions and valid generalizations.

Thus, computation of certain indices or measures along with searching for patterns of relationships that exist among the data group is called as analysis of data. Analysis of data can be categorized as descriptive analysis and inferential analysis.

### **5.2 DESCRIPTIVE ANALYSIS:**

Descriptive analysis limits generalizations to the particular group of individuals observed. No conclusions are extended beyond this group and any similarity to those outside the group cannot be assumed.

The researcher has employed descriptive analysis to demonstrate the nature of distribution of the scores of each dimension of AQ®, in both the groups ---experimental group and control group.

The four dimensions of AQ®, are :

- Control
- Ownership
- Reach
- Endurance

**Description of the scores of each dimension of AQ®:**

The mean scores of the each dimension is converted into percent mean scores using the following formula:

$$\text{Percent Mean} = \frac{(\text{Mean} - \text{lowest score possible})}{(\text{Highest score possible} - \text{lowest score possible})} \times 100$$

Graphs are used widely in research to represent data. Data obtained after the analysis, can be represented in graphs to illustrate the findings. The researcher has used the bar graphs to illustrate the scores of both the groups, on each dimension of AQ®.

The percent mean scores of each dimension can be categorized as follows :

0-20 = negligible

20-40 = low

40-70 = substantial

70-100 = high

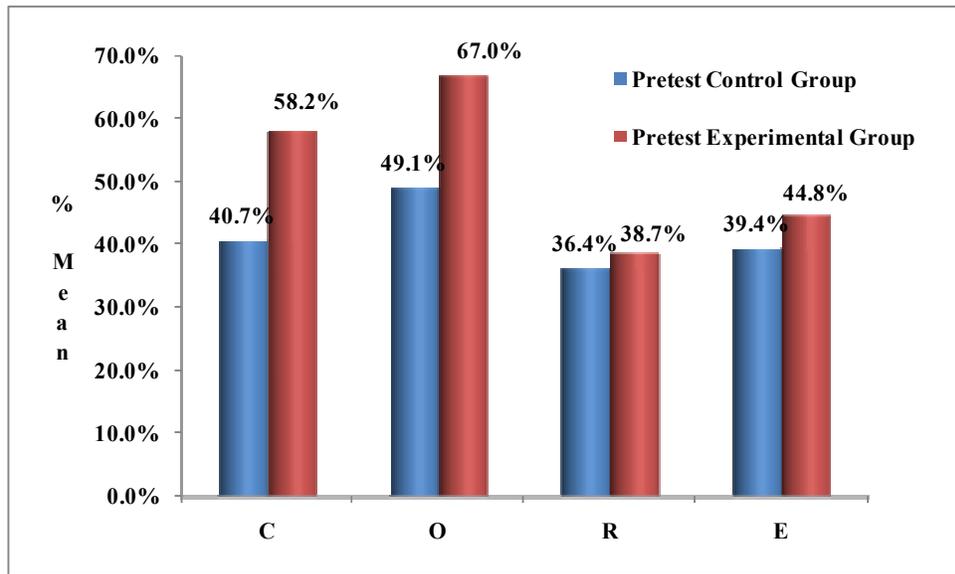
**Table 5.1**

**Description of the Pre-test scores of the AQ dimensions, based on the Percent Mean Value.**

<b>% Mean</b>	<b>C</b>	<b>O</b>	<b>R</b>	<b>E</b>
Pretest Control Group	40.7%	49.1%	36.4%	39.4%
Pretest Experimental Group	58.2%	67.0%	38.7%	44.8%

The graph 5.1 shows the comparison of the pre-test scores of both experimental group and control group, in the form of percent mean of each dimension of AQ:

**Graph: 5.1 Pre-test scores of the AQ dimensions, based on the Percent Mean Value.**



C = Control    O = Ownership    R = Reach    E = Endurance

From the table 5.1 and graph 5.1, given above, it can be seen that the percent mean value of the pre-test scores on AQ dimensions of Control group is **low**, whereas the pre-test scores on AQ dimensions of the experimental group are **substantial** in

percent mean values, except the percent mean of the Reach dimension, which is low at 38.7%. Both, Control and Experimental group have scored the most in the dimension of Ownership, at percent mean values of 49.1 and 67.0, respectively.

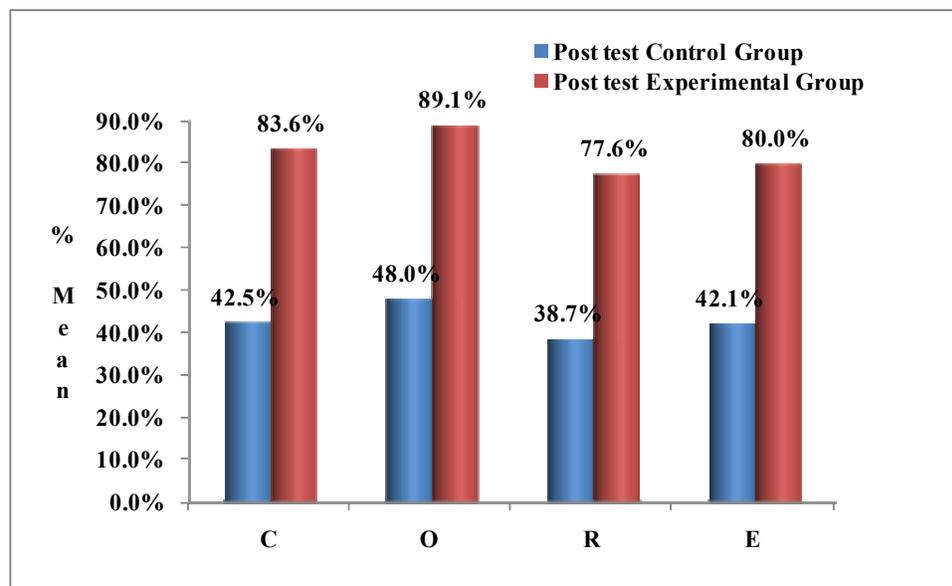
**Table 5.2**

**Description of the Post-test scores of the AQ dimensions, based on the Percent Mean Value.**

<b>% Mean</b>	<b>C</b>	<b>O</b>	<b>R</b>	<b>E</b>
Post test Control Group	42.5%	48.0%	38.7%	42.1%
Post test Experimental Group	83.6%	89.1%	77.6%	80.0%

The graph 5.2 shows the comparison of the post-test scores of both experimental group and control group, in the form of percent mean of each component of AQ :

**Graph: 5.2 Post-test scores of AQ dimensions, based on the Percent Mean Value.**



C = Control      O = Ownership      R = Reach      E = Endurance

From the table 5.2 and graph 5.2, given above, it can be seen that the percent mean value of the post-test scores on AQ dimensions of Control group is still **low**, whereas the post-test scores on AQ dimensions of the experimental group have shown immense improvement and are now **high** in percent mean values. Again both, Control and Experimental group have scored the most in the dimension of Ownership, at percent mean values of 48.0 and 89.1, respectively. The percent mean values of the post-test scores of Experimental group, on each dimension of AQ have shown great improvement due to the implementation of the Programme for enhancing AQ®, of students.

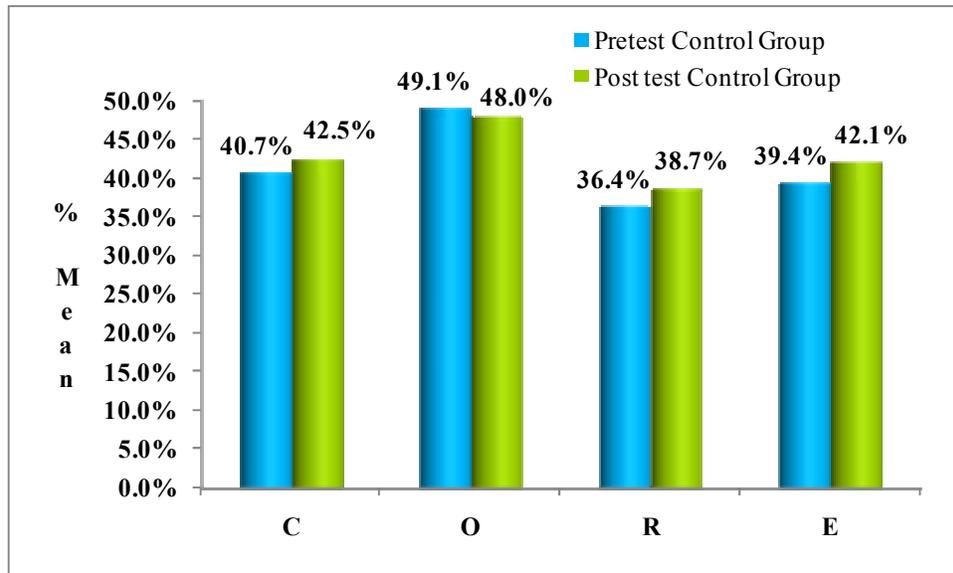
**Table 5.3**

**Description of the Pre-test and Post-test scores of AQ dimensions, of Control Group, based on Percent Mean Value.**

<b>% Mean</b>	<b>C</b>	<b>O</b>	<b>R</b>	<b>E</b>
Pretest Control Group	40.7%	49.1%	36.4%	39.4%
Post test Control Group	42.5%	48.0%	38.7%	42.1%

The graph 5.3 shows the comparison of the pre-test and post-test scores of the Control group, in the form of percent mean of each component of AQ :

**Graph : 5.3 Pre-test and Post-test scores of AQ dimensions, of Control Group, based on Percent Mean Value.**



C = Control      O = Ownership      R = Reach      E = Endurance

From the table 5.3 and graph 5.3, given above it can be seen that the post-test shows a little improvement in the scores of each dimension, except one dimension of ownership, whose percent mean value has decreased from 49.1 in pre-test to 48.0 during the post-test.

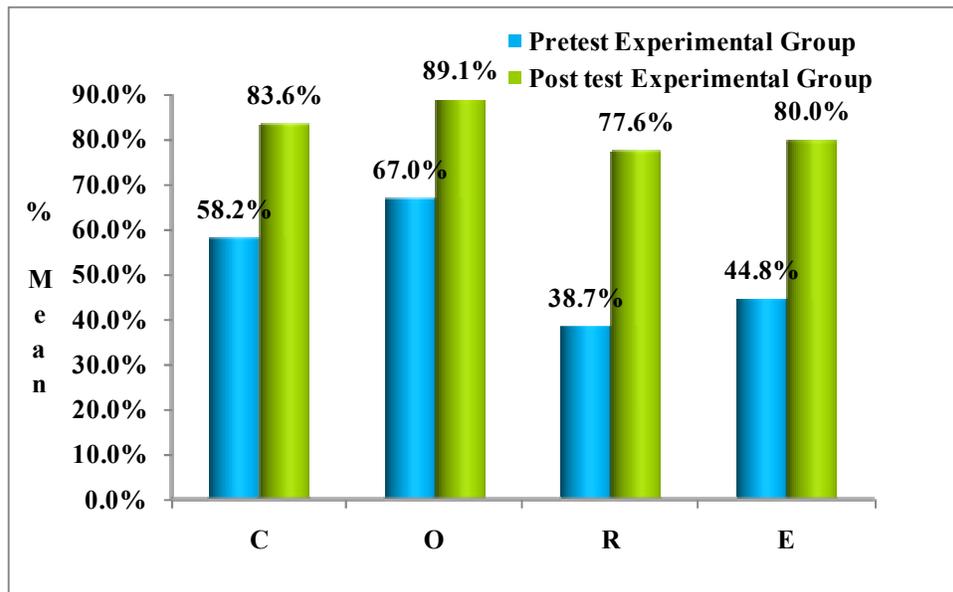
**Table 5.4**

**Description of the Pre-test and Post-test scores of AQ dimensions, of Experimental Group, based on Percent Mean Value.**

% Mean	C	O	R	E
Pretest Experimental Group	58.2%	67.0%	38.7%	44.8%
Post test Experimental Group	83.6%	89.1%	77.6%	80.0%

The graph 5.4 shows the comparison of the pre-test and post-test scores of the experimental group, in the form of percent mean of each component of AQ :

**Graph : 5.4 Pre-test and Post-test scores of AQ dimensions, of Experimental Group, based on Percent Mean Value.**



C = Control      O = Ownership      R = Reach      E = Endurance

From the table 5.4 and graph 5.4 given above, it is clear that the percent mean of the post-test scores on each dimension of AQ, show a drastic improvement. The pre-test scores on each dimension of AQ are **substantial**, but only the Reach dimension is **low** in the percent mean values. Whereas, the post-test scores of the experimental group, show immense improvement on each dimension of AQ, and are now **high** at percent mean values.

### **5.3 INFERENCE ANALYSIS:**

Inferential analysis is used to make inferences concerning parameters, based on sample statistics. It is concerned with determining, how likely, are the results based on the present sample, applicable for the entire population. Most important here, is, to use the test of significance, in order that the hypothesis can be tested, the validity of the data can be determined to indicate the conclusions.

This process of analyzing the research work is called ‘testing of hypotheses’. On the basis of inferential analysis, the interpretation is done.

### **5.4 HYPOTHESIS:**

The hypothesis is precisely defined as a tentative or working proposition suggested as a solution to the problem. Hypotheses are formulated only as the suggested solution to the problem, with the objective that, the study may lead either to its rejection or to its retention.

Hypothesis could be null or research hypotheses and it could be rejected or accepted after the analysis of data has been done.

#### **Null Hypothesis:**

Null Hypothesis is formulated for testing the statistical significance, since, this form is a convenient approach to statistical analysis.

For the present study, ‘Null Hypothesis’ were formulated.

## **Hypothesis Testing:**

For the present study, the researcher has selected Quasi Experimental--- pre-test—post-test nonequivalent group design. The scores obtained from the pre-test and post-test of both, namely, the experimental group and the control group, are then used for testing, using the ANCOVA--- statistical technique.

### **5.5 ANCOVA (Analysis Of Co-Variance):**

ANCOVA is useful to the experimenter because of various reasons, as it is impossible or quite difficult to equate, Control or Experimental group, at the start of the experiment.

Hence, the ANCOVA technique is used for inferences in the present study.

Following steps are involved in its calculations:

1. Calculation of total SS ( $V_t$ )
2. Calculation of SS among means ( $V_b$ )
3. Calculation of SS within groups ( $V_w$ )  
( $V_w = V_t - V_b$ )
4. Calculation of F ratio ( $F = V_b / V_w$ )
5. Calculation of  $SS_{yx}$

ie, where  $SS_y$  have been adjusted for any variability in  $y$ , contributed by  $x$  or that variability in  $x$  is held constant.

1. Computations are carried for the purpose of correcting the final (y) scores for the differences in initial (x) scores.
2. In this step correlation and regression is arrived within and among the means.
3. Calculation of the adjusted y means is carried out.
4. Calculation of the significance among adjusted y means is carried out with standard error of difference of any 2 adjusted means.

**Null Hypothesis:** There will be no significant difference in the post-test means of AQ®, of junior college students of the experimental and control group.

This was tested by using ANCOVA.

The following table 5.5 shows the means of pre-test and post-test scores in AQ®, of both experimental and control group :

**Table 5.5**

**The means of pre-test and post-test scores of experimental and control group.**

<b>Test</b>	<b>Experimental group</b>	<b>Control group</b>
Pre-test	123.4	106.22
Post-test	172.1	108.5

The table 5.6 shows the summary of ANOVA of the pre-test and post-test scores of AQ®

**Table 5.6**

**Summary of ANOVA of pre-test and post-test scores :**

<b>Source of Variation</b>	<b>df</b>	<b>SSX</b>	<b>SSY</b>	<b>MSX(V<sub>x</sub>)</b>	<b>MSY(V<sub>y</sub>)</b>
Among Mean	1	7378.81	100996.84	7378.81	100996.84
Within Group	98	24812.58	20453.32	253.19	208.71
<b>Total</b>	<b>99</b>	<b>32191.39</b>	<b>121450.16</b>		

$$F_x = \frac{7378.81}{253.19} = 29.14 \quad \text{From Table F}$$

$$F_y = \frac{100996.84}{208.71} = 483.92 \quad \text{df= 1/98}$$

**F at 0.05 level = 3.92**  
**F at 0.01 level = 6.84**

i.e, both  $F_x$  and  $F_y$  are significant at 0.01 level, which shows that both experimental and control group have significant differences in their pre-test scores. This shows that the researcher was not successful in getting two equated groups.

In the next step, the adjusted ss of y was calculated.

The table 5.7 shows the summary of ANCOVA

**Table 5.7**  
**Summary of ANCOVA**

Source of variance	df	ssx	ssy	sxy	ssyx	Msy.x (Vy.x)	SDy.x
Among means	1	7378.81	100996.84	27299.02	49755.77	49755.77	35133.10
Within groups	97	24812.58	20453.32	18401.3	6796.32	70.07	
<b>Total</b>	<b>98</b>	<b>32191.39</b>	<b>121450.16</b>	<b>45700.32</b>	<b>56552.09</b>		

$$F_{yx} = \frac{49755.77}{70.07} = 710.14$$

**From table F**  
**df= 1/97**

**F at 0.05 level = 3.92**

**F at 0.01 level = 6.84**

From the above table it is clear that  $F_{yx}$  is highly significant far beyond the 0.01 level (F at 0.01 level = 6.84) i.e, after correcting the variability in initial scores of the two final means, they differ significantly. Hence, the null hypothesis is rejected. There is a significant difference in the AQ® scores of experimental group.

To find out the significance in the difference among the adjusted post-test means the next step is applied.

The following table 5.8 shows calculation of the adjusted post-test means.

**Table 5.8**  
**Adjusted post-test means**

<b>Group</b>	<b>N</b>	<b>M<sub>x</sub></b>	<b>M<sub>y</sub></b>	<b>M<sub>yx</sub> (adjusted)</b>
<b>Control</b>	<b>50</b>	<b>106.22</b>	<b>108.50</b>	<b>114.87</b>
<b>Experimental</b>	<b>50</b>	<b>123.40</b>	<b>172.06</b>	<b>165.69</b>
<b>General means</b>		<b>114.81</b>	<b>140.28</b>	<b>140.28</b>

Significance of difference Among Adjusted post-test means was tested by applying t test.

**Table 5.9**  
**Significance of difference between Adjusted post-test means**

<b>Groups</b>	<b>Adjusted Means</b>	<b>SED</b>	<b>Calculated t</b>	<b>Level of Significance</b>
<b>Control</b>	<b>114.87</b>	<b>1.674</b>	<b>30.35</b>	<b>0.01</b>
<b>Experimental</b>	<b>165.69</b>			

Tabulated Values of t

For df = 97 (Table D)

t at 0.05 level = 1.98

t at 0.01 level = 2.63

Calculated  $t = 30.35$

Value of  $t$  is significant at 0.01 level.

Therefore, null hypothesis is rejected at 0.01 level.

### **CONCLUSION :**

There is a significant difference in the post-test means of AQ®, of junior college students, of the Experimental and Control group.

## **5.6 OBSERVATIONS AND DISCUSSION RELATED TO THE IMPLEMENTATION OF THE PROGRAMME:**

In the present study, the students of the experimental group showed an enhanced AQ®, due to the implementation of activities . In the post-tests, the AQ® of the experimental group was more than that of control group. This was due to the treatment given to the experimental group. Among the activities implemented in the experimental group, ‘I LEAD myself’, ‘fight bravely’, ‘workshop on RET” and ‘Role-Play’ were found to be very effective. They enabled the students to get better insight into their AQ response pattern and also guided them to gradually reach an appropriate response during the adversity.

**Observations made by the researcher during the implementation of the activities :**

1. The researcher observed that the students were a bit nervous, when she announced the pre-test and hesitated in the beginning to answer the test, as they were worried about the scores, but the researcher explained and made them understand, how these scores would help the researcher to provide and guide them towards improving their ability to face adversities. This pacified and cleared the apprehensions of students.
2. The researcher observed that the students were curious and highly interested in each activity. They enthusiastically participated in all the discussions and readily and sincerely responded to all the questions or worksheets provided by the researcher.
3. After the implementation of the 'I LEAD MYSELF' activity, the researcher observed a marked improvement in their style of responses towards the adversities. There was an improvement in the student's attitude---they were seen struggling to keep up their optimism and reach some positive step or action, necessary to fight against the adversity at hand. Later for all the activities, the students followed the LEAD sequence of responding to the adversity, whenever the researcher put forward an imaginary adverse situation before them.
4. The researcher was enthralled with the students' response and participation in the 'Workshop on RET---Rational Emotive Therapy', organized as one of the activities. During the session on 'Negative-Positive Self Talk', many students readily came forward to share their experiences and express a change in their

response towards the adversities they faced. The students in the audience clapped and cheered the volunteering students.

5. The researcher observed that not one student remained absent during the course of implementation of the activities. This showed their interest in the implementation of the AQ Programme.
6. During the implementation of ‘Dramatization’ and ‘Learning by Seeing’, the researcher observed that the students were awestruck by the adversities presented in the play or the movie. It was evident in their discussions conducted later, that the students having led a protected life, many were spell-bound---with the gravity of adversities that people actually come across in their real life. Though, the students found it hard to imagine, they were able to empathize with the characters, and saw it as an example of courage and optimism, necessary to be developed, when faced with adverse circumstances.
7. The researcher also observed that the students, who faced a lot of challenges in their daily life, were in fact the ones who took the initiative in the activities and tried their level best to give a better response to the imaginary adversities presented by the researcher.
8. The students also reported that they now felt more confident and less panicked, when an adversity arose.

**Observations made by the researcher, after the implementation of the activities:**

1. The researcher observed a thorough change in the attitude of students towards facing adversities in life. The students had begun to analyze the situation and gradually think of a solution to improve the situation. If one would panic,

others would help—to take the LEAD, to formulate a suitable response to the adversity.

2. With regard to the improvement in the AQ® of students, the researcher specifically noted two such examples:

- One student who faced the challenge of an alcoholic father---now reportedly sought for a transformation in her way of responding to this adversity at home. She would not just give up. She actually thought that there was no evidence, that the situation would never improve and hence began thinking of means and resources, to take an appropriate action. With the help of a counselor in the college, she contacted a rehabilitation centre, even convinced her mother, of the need to get her father rehabilitated. There was a remarkable transformation in the student's response to the adversity.
- Another important observation made by the researcher, was of a student whose father suddenly lost his job in January. It was this student who took the lead in his family to stop them panic, but instead helped his father to initiate an optimism and formulate a favourable response to get over the adverse situation. He reported of how, his father is now working on a consultant basis, meanwhile searching for a new job. Even the boy is helping the family to fight over this adversity, by himself seeking a part-time job to support his studies.

## **5.7 SUGGESTIONS FOR TEACHERS:**

1. Teachers should organize various discussions and debates with students regarding Adversity Quotient® and its implications in today's age of crisis, to make students aware of the need of improving their AQ®.
2. Workshops and seminars on positive thinking and Personality Development Programmes should be organized for students, to prepare the students to face this modern day increasing adversities.
3. Projects on biographies of brave leaders or heroes like scientists or entrepreneurs should be assigned to the students to enable them to learn from their examples.
4. Discussions and workshops should be organized for parents to help them realize the increasing adversities in their children's lives and equip them with the ability to help their children to develop a better response to these adversities.
5. Articles on AQ®, its importance, how it determines one's success and how it can be improved should be put up on notice boards in the educational institutions.
6. Teachers can use discovery learning, by introducing the students to an adversity and motivating them to try and overcome that adversity on their own, thereby allowing them to discover the same facts in a different and positive way.
7. Role-play and similar techniques can be used, wherein, real life situations can be simulated to encourage and enable students to think of alternate strategies in overcoming adversities.

8. Games and activities should be organized, to encourage students to strive harder in overcoming difficult situations and strengthening survival instincts.
9. Analysis of Newspapers, various adversities highlighted in the Newspapers and discussions should be held with students, about what should be their response to such adverse situations.

## **5.8 SUGGESTIONS FOR FURTHER RESEARCH :**

The researcher hereby, suggests some areas in which AQ can be further studied and explored as a new science for human development:

1. Same study can be conducted with variables like Socio-Economic status and Decision making ability of students.
2. Experiments to study the effect of AQ on student achievement can be conducted.
3. Research can be carried out to explore the relationship between AQ and Socio-Economic Status of students.
4. Research can be carried out on exploring the relationship between AQ of teachers and students.
5. Research can be carried out to study the relationship between the AQ of students and their choice of careers.

# **CHAPTER 6**

## **SUMMARY**

### **6.1 INTRODUCTION**

Education does not merely consist in imparting knowledge. It primarily consists in the total personality development of the students. It is the power to enable students to keep their eyes and minds open to outside reality, in order to understand, what is happening in the world around, to reflect critically over various experiences and events and to respond creatively to various issues and problems, that they encounter in their day to day living.

In this age of modern day adversities, education is the key force that can develop resilience in the students and develop their potential to handle adverse situations. There are various challenges and adversities that our students are facing in their daily lives. It is here that their Adversity Quotient(AQ)®, plays an important role. AQ is the ability of an individual to handle adverse situations and this AQ can be increased.

### **6.2 NEED OF THE STUDY**

The researcher is aware of the increasing adversities in students' lives. The increasing stress, unhealthy competition and failed expectations which have become a part of their daily lives. Therefore the researcher feels that there is a dire need for conducting AQ® enhancement Programmes to prepare our students to develop a better response to the adversities faced by them. Our young children are our tomorrow's citizens and hence the researcher opines that there is a need to implement such AQ® enhancement Programmes right from the school age, to

develop our students to be climbers rather than quitters. Therefore, the researcher felt the need to develop a Programme for enhancing the AQ® of students.

### **6.3 TITLE OF THE STUDY**

“DEVELOPMENT OF A PROGRAMME FOR ENHANCING THE ADVERSITY QUOTIENT® OF JUNIOR COLLEGE STUDENTS”.

### **6.4 VARIABLES OF THE STUDY**

The variables of the present study are:

- The Programme (activities) implemented---is the Independent Variable.
- Adversity Quotient®---is the Dependent Variable.

### **6.5 : OPERATIONAL DEFINITIONS**

#### **➤ ADVERSITY QUOTIENT (AQ):**

“Adversity Quotient is the determining factor to check the unconscious pattern in which people respond to adversity or crisis”.--- Paul Stoltz.(1997)

The researcher has adopted the definition of Adversity Quotient from the work done by Paul Stoltz. (PEAK Learning)

**‘Adversity Quotient, is the sum of the scores obtained on four scales of control, ownership, reach and endurance---which are measured on the AQ profile®**

**Control:** It measures the degree of control that a person perceives, he/she has over adverse events. It is a strong gauge of resilience and health.

**Ownership:** It measures the extent to which a person holds himself or herself accountable for improving a situation. It is a strong gauge of accountability and likelihood to take action.

**Reach:** It is the perception of how large or far-reaching events will be. It is a strong gauge of perspective burden and stress level.

**Endurance:** It is the perception of time over which good or bad events and their consequences will last or endure. It is a strong gauge of hope or optimism.

AQ is mathematically represented as:

$$C + O_2 + R + E = AQ$$

$$O_2 = O_r + O_w$$

Here C = score on control scale

O = score on ownership scale

O<sub>r</sub> = score on ownership scale (origin)

O<sub>w</sub> = score on ownership scale (ownership)

R = score on reach scale

E = score on endurance scale

➤ **PROGRAMME:**

‘Programme refers to the set of activities developed to enhance the AQ® of students, having their active involvement in its implementation.

➤ **EFFECTIVENESS OF THE PROGRAMME:**

Gain in the post-test scores of AQ®.

## **6.6 OBJECTIVES OF THE STUDY**

- To develop the Programme for enhancing the AQ® of junior college students.
- To study the effectiveness of the developed Programme.

## **6.7 HYPOTHESIS**

For the present experimental study, the researcher had formulated the following Null Hypothesis:

There will be no significant difference in the post-test means of AQ® of junior college students, of the Experimental and Control group.

## **6.8 SCOPE AND LIMITATIONS :**

- The study is conducted on only one class of XI Commerce, of two English medium colleges, namely, Thomas Baptista Junior College and Vartak College in Vasai Taluka, District.-Thane.

- The study is limited to the extent of the AQ® scores, as per the AQ profile®, measured by using a paper pencil test.

## **6.9 SAMPLE AND ITS SELECTION :**

For the present study the researcher has used the Non-probability type of sampling in which Incidental Sampling has been used. This technique was implemented with respect to the feasibility and availability of students for the longer duration of time, for which the researcher had to depend on the permission of the head authority of the college in which research activity was conducted.

A sample of 50 students in each group, namely 50 students in experimental group and 50 students in control group were chosen from Thomas Baptista Junior College and Vartak College respectively.

## **6.10 DATA GATHERING TOOLS :**

THE ADVERSITY RESPONSE PROFILE® :( Stoltz,1997)

The Adversity Response Profile(ARP)®, is designed by Dr. Paul Stoltz of PEAK Learning, Inc, to measure an individual's style of responding to adverse situation. It is a self rating questionnaire with a 5 point bipolar scale. It has 14 situations, with four scales measuring the four dimensions---Control, Ownership, Reach and Endurance. The sum of the four scales gives a person's AQ®

## 6.11 METHODOLOGY

- The present study was an experimental study, a Quasi Experimental Design, Non Equivalent groups Pre-test---Post-test Design was used.
- The activities were developed by the researcher for enhancing the AQ® of students, on the basis of the objectives determined for the same.
- The prepared activities were assessed by experts for validity.
- A pre-test was administered to the students of both the groups, namely Experimental and Control group, by providing them the AQ profile®.
- Programme (activities) were implemented on the Experimental group only.
- The same post-test was administered, after completion of all the activities, to both the groups.

## 6.12 DATA ANALYSIS :

For the present study, the researcher analyzed the data descriptively and inferentially :

**Descriptive Analysis** : The researcher calculated the Percent Mean of the each dimension of AQ, scored on the AQ Profile, namely Control, Ownership, Reach and Endurance. She illustrated the difference in the scores of each group, on each dimension, using Bar Graphs.

**Inferential Analysis** : The researcher tested the null hypothesis using the Non-Parametric statistical technique of ANCOVA (Analysis Of Co-Variance) and appropriate inferences were drawn out.

### **6.13 CONCLUSION OF THE STUDY**

There is a significant difference in the post-test means of AQ®, of junior college students, of the Experimental and Control group.

### **6.14 SUGGESTIONS FOR TEACHERS :**

- Teachers should organize various discussions and debates with students regarding Adversity Quotient® and its implications in today's age of crisis, to make students aware of the need of improving their AQ®.
- Workshops and seminars on positive thinking and Personality Development Programmes should be organized for students, to prepare them to face this modern day increasing adversities.
- Projects on biographies of brave leaders or heroes like scientists or entrepreneurs should be assigned to the students to enable them to learn from their examples.
- Discussions and workshops should be organized for parents to help them realize the increasing adversities in their children's lives and equip them with the ability to help their children to develop a better response to these adversities.
- Articles on AQ®, its importance, how it determines one's success and how it can be improved should be put up on notice boards in the educational institutions.
- Teachers can use discovery learning, by introducing the students to an adversity and motivating them to try and overcome that adversity on

their own, thereby allowing them to discover the same facts in a different and positive way.

- Role-play and similar techniques can be used, wherein, real life situations can be simulated to encourage and enable students to think of alternate strategies in overcoming adversities.
- Games and activities should be organized, to encourage students to strive harder in overcoming difficult situations and strengthening survival instincts.
- Analysis of Newspapers, various adversities highlighted in the Newspapers and discussions should be held with students, about what should be their response to such adverse situations.

## **6.15 SUGGESTIONS FOR FURTHER RESEARCH :**

The researcher hereby, suggests some areas in which AQ can be further studied and explored as a new science for human development :

- Same study can be conducted with variables like Socio-Economic Status and Decision Making Ability of students.
- Experiments to study the effect of AQ on student achievement can be conducted.
- Research can be carried out to explore the relationship between AQ and Socio-Economic Status of students.
- Research can be carried out on exploring the relationship between AQ of teachers and students.
- Research can be carried out to study the relationship between the AQ of students and their choice of careers.

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## **MISCELLANEOUS**

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- 2. Stoltz, Paul Technical supplement for ARP®, PEAK Learning ltd.**

## APPENDIX – A

### LIST OF EXPERTS

1. **Dr. Madhura Kesarkar**,  
Reader, Head of the Department,  
Department of Education,  
S.N.D.T. Women's University,  
Churchgate.
2. **Dr. Pradnya Wakpainjan**,  
Reader,  
Department of Education,  
S.N.D.T. Women's University,  
Churchgate.
3. **Dr. Pravina Ben Tapalia**  
Reader,  
Department of Education,  
S.N.D.T. Women's University,  
Churchgate
4. **Mrs. Rekha Rathod**  
Lecturer,  
Department of Education,  
S.N.D.T. Women's University,  
Churchgate
5. **Mrs. Mabel Pimenta**  
Lecturer,  
Pushpanjali College of Education,  
Vasai Road (W),  
Dist. Thane.
6. **Mrs. Angelina Nunes**  
Lecturer,  
Pushpanjali College of Education,  
Vasai Road (W),  
Dist. Thane.

## **APPENDIX – B**

### **UNDERTAKING WITH PEAK LEARNING REGARDING ARP ®**

# APPENDIX – C

## ACTIVITIES

### ACTIVITY 1: DON'T QUIT.

#### OBJECTIVES:

- To enable students to develop endurance skills during adversities.
- To enable students to develop control during adversity.

**STUDENTS:** Five groups of eight students in each.

**TIME:** Two lectures ( 45 mins each )

#### PROCEDURE :

- Teacher distributes students in groups and asks them to select a group leader.
- Teacher gives each group a sheet of a printed poem "Don't Quit".
- Teacher instructs the students that they have to read the poem part by part and try to explain what they understand of its theme, its hidden meaning. They must try to read between the lines and get what message it gives.
- Teacher informs that as they go on discussing and explaining, they must also jot down the important points.

- Teacher asks each group to begin by first reflecting to guess what the title of the poem suggests?

**Teacher:** You all first read the title and try to guess what it suggests. From the title, what do you think will the poem be based on? (Teacher moves around as students discuss. It would be based somewhat on the following lines.)

**Students:** Don't quit --means never give up.

- : Yes. I think it suggests that we must never run away from problems in life.
- : I think it must be related to our hardships and difficulties in studies.
- : Okay, I feel it must be about some great person who has never quit, despite various obstacles in life.

**Tr:** You may have come across various predictions of what this poem signifies. So won't you like to read the poem and see what it really holds for you.

**St:** Yes. For that we must read a little further.(students read the first stanza)

- : The first two lines in itself say a lot of the poem, that it is based on life and its challenges.
- : These lines are striking as they highlight how much we are eager to be happy and content in life.
- : Yes but the poet seems to console us when he says that we must 'Rest' and wait patiently but never give up.
- : But what does this line mean "Funds are low and the debts are high"

**Tr:** It tries to suggest something about the resources we try to create during crisis. For eg, What would you feel if you had to join some course desperately on which your career depended but you lack the financial resources. May be your parents cannot afford it.

**St:** It would feel like, Oh! one more big obstacle. My career is ruined.  
:  
: Yes or may be that "what should I do now? Should I plan for something else?  
:  
: So it says that we must not only keep worrying but do something about it. (Teacher moves around and observes the students and waits only to clear any queries of the students or if any doubts arise.)

(Students read further)

**St :** In this second stanza, the poet mentions of how unpredictable life is.  
:  
: What strikes most is the astonishing fact that we often seem to give up- when we are actually very close to winning.  
:  
: But it is the truth. At least I experience it that we tend to give up at the last minute.  
:  
: I agree with the poet that hard work and perseverance can definitely lead us to win any obstacles in life.  
:  
: If you look at any great person in life. It will be often seen that success did not come easily to them but they won because they were able to convert obstacles into opportunities.  
:  
: But how can one turn complete failure into success?

**Tr :** Each time you come across failure. What happens? Reflect on those times of failure and think. Imagine if you failed in your exams.

**St :** If I failed I would feel dejected and depressed.

: For the first few days we feel disappointed and lost but we would also try to find where we have gone wrong?

: We would learn from our mistakes and therefore decide to never repeat those mistakes.

: So here in fact it proves that we always learn from our mistakes. So it automatically becomes our strength.

: It is exactly what the poet says that we learn from bad experiences too. We develop our strengths.

: But it cannot happen quickly in a day or so. It will be slowly and gradually. But we must still not give up.

(Students proceed further)

**St :** Success is failure turned inside out. So it is like two sides of the same coin.

: Yes and it also says that like every dark cloud has a silver line the same way every bad time has something good to offer. So we must not lose hope.

: In our life if we see. It is so easy to lose hope but to instill courage it takes a lot of efforts.

: In this fast world we have become so used to instant food that we want happiness instantly. Even if we know our mistakes, Nobody wants to take the trouble, Or even put in a bit of efforts.

- : We never like to take accountability. We just want to run away from problems, not face them.
- : For all such, this poem comes as a great reminder, that we must not quit our trials but keep trying if we want to be victorious.

- Teacher asks each group leader to present what their group has discussed and what opinions they have come up with.
- Teacher concludes in the end by asking students of what they learnt from this experience. If what they came up with or introspected helped them to at least initiate a change in their attitude of accepting defeats easily during adversities.

## ACTIVITY 2: IDOL INSPIRATION

### OBJECTIVES:

- To enable students to develop accountability and ownership of life.
- To enable students to limit the reach of adversity in other areas of life.

**STUDENTS:** Five groups of eight students in each.

**TIME:** 1 lecture (45 mins duration)

### PROCEDURE :

1. Teacher divides students into groups and asks the students to select a leader.
2. Teacher provides each group with a printed copy of anecdotes and incidents in the life of real life heroes like—Hellen Keller, Vilma Rudolph, Lance Armstrong, Christopher Reeves and David Hartman.
3. Teacher gives 10 minutes time to read of their Idol.
4. A discussion is then to follow, about the significant qualities and inspiring actions of these Idols that strike them the most.
5. Each group leader is then asked to come out one by one and present what their group had found out as amazing and inspiring in the life of this role-model.

### **ACTIVITY 3: WORKSHOP ON POSITIVE THINKING.**

#### **( RATIONAL EMOTIVE THERAPY)**

#### **OBJECTIVES:**

- To enable students to develop ownership during adversities.
- To enable students to develop endurance skills during adversities.

**TIME:** 4 lectures (45 minutes each lecture)

**INVITED COUNSELLOR:** Rev. Fr. Patrick D'souza. (Professor and director of the department of counseling, personality development and value education at Gonsalo Garcia College, Vasai. Author of 'Sampana Jeevana Kade' and many other books.

#### **PROCEDURE :**

1. Teacher arranges a workshop and invites a spokesperson.
2. One student introduces the guest and requests him to start the session.
3. Exercises on developing positive thinking are conducted to give examples of how positive self talk helps to cope with emotional upsets and interpersonal conflicts.
4. Teacher then conducts a discussion with the students of how they feel positive thinking can be adopted on a daily basis.
5. Teacher explains that practicing positive talk will help them to elevate their self concept.
6. Teacher explains the fact that during adversities, beating their inferior complex and rising above the crisis is very important.

## ACTIVITY 4: FIGHT BRAVELY!

### OBJECTIVE:

- To enable students to limit the reach of the adversity over their life or survival.
- To enable students to develop endurance in difficult times.

**STUDENTS:** Five groups of eight students in each.

**TIME:** 45 mins (1 lec)

### PROCEDURE :

1. Teacher places a worksheet before each group.
2. Teacher explains and gives instructions to fill the worksheet.
3. Each group has to discuss and fill in their responses.
4. In the worksheet, one example is solved to provide an idea to the students.
5. Teacher gives 20 mins to fill the worksheet
6. Each group's leader will come and read out their responses.
7. Teacher then will hold a discussion on:- What students experienced during this activity.
8. Did it help them to develop positive insights regarding each problem given?

## WORKSHEET

1. An Air force Pilot's plane is shot down by the enemy. He is now alone in the enemy territory, bruised and battered. His response to adversity could have been in two types:

I Cannot endure because:	I can still endure because:
<ol style="list-style-type: none"><li>1. I am shot down over enemy territory.</li><li>2. I am all alone and wounded</li><li>3. The enemy is all around</li><li>4. I have limited food and water</li><li>5. No hope for escape.</li></ol>	<ol style="list-style-type: none"><li>1. I have already survived shooting.</li><li>2. I atleast posses some food and water</li><li>3. I can now use my survival training.</li><li>4. I have a signaling device-so I can signal incessantly for help.</li><li>5. I can keep trying, everything is not yet over.</li></ol>

Similarly solve the worksheet and try to give answers to difficult situations given below: One response is given, your group has to give the other kind of response:

2. A young athlete practiced hard for Olympic selections, but failed and was not selected at the national level to represent his country in the Olympics 2008. His response can be in two ways:-

Its all over because:	I can still endure because:

3. A young boy losses his one arm in a road accident due to a truck drivers rash driving. His response could have been in two ways:-

Its not worth living because:	Life is beautiful, its still worth living because:

## ACTIVITY 5: I LEAD MYSELF

### OBJECTIVE:

- To enable students to take ownership of their life and its adverse events.
- To enable students to develop control over adverse situations.
- To enable students to sustain and endure during adversities.
- To enable students to limit the reach of adversity in other areas of life.

**TIME:** 45 mins(1lecture)

### ABOUT THE ACTIVITY :

Originally developed by Dr. Paul Stoltz, of PEAK Learning, 'LEAD' sequence is based on the notion that we can alter our success by changing our habits of thought. As the adversity strikes we get alarmed, instead to hold on and think of a solution helps to develop control over it and also to limit the reach of the adversity in other areas of our life. Based on this sequence the researcher has made a worksheet with questions to help students formulate their responses and try to reach a solution.

### PROCEDURE :

- 1) Teacher explains what is LEAD sequence to the class. (An adversity will be placed before them and the teacher explains how they have to gradually move from one question to another, given in the worksheet, thus reaching a solution or a conclusion.

2) Teacher explains each step of LEAD

**L**= Listen to your adversity response and then write down on the worksheet

**E**= Explore all origins and take ownership of this adversity.

**A**= Analyse the evidence.

**D**= Do something to get over this adversity.

3) She explains that each question is to be responded to step by step in the worksheet given.

4) Teacher distributes the worksheet to the students and gives 20 mins to complete it.

5) Teacher moves around the class to explain if any queries arise.

6) Teacher holds discussions with the students as to how they felt regarding:-

- Moving towards a solution to an existing problem.
- Did they notice any change in their response, prior and later.

## WORKSHEET

Adversity strikes!

You are caught in heavy floods in Mumbai and lose all your important testimonials (Certificates) needed for admission after HSC results.

Imagine this adversity has struck you and now respond to the following questions

**L**

1. What would be your first response to this adversity?

**E**

2. What are the reasons that this situations occurred?
3. Whose fault is it here?
4. What better could I have done given a chance?

**A**

5. Is this situation completely out of control?

**Yes**

**No**

6. Is there any proof that things will never improve?

**Yes**

**No**

7. Is there nothing I can do to change or improve things

**Yes, I can**

**No, I cannot**

**D**

8. What steps do I need to take to improve this situation?
9. Will talking of this problem or seeking advice from friends and teachers or the past college authorities do some good?
10. Can I talk to authorities while seeking new admission and explain the situation?
11. When should I start taking action?
12. When I think of this adversity now, what is my response to it?

## ACTIVITY 6: OPTIMISTIC IMAGINATION

### OBJECTIVES:

- To enable students to develop accountability and ownership during adversity.
- To enable students to develop endurance skills during adversities.

**TIME :** 2 lectures (45 mins each lecture)

**STUDENTS :** Five groups of eight students in each.

### PROCEDURE :

1. Teacher distributes students in groups and asks them to select a leader.
2. Teacher asks each group to imagine a situation, wherein they encounter an illness or a sudden accident and become permanently bedridden.
3. Teacher provides each group 30 minutes to imagine and collectively think of ways and means to overcome this situation.
4. Teacher provides hints as in to think of their strengths, talents or hobbies they can pursue to spend time constructively
5. Teacher then asks each group to use these ideas and other ideas and formulate an action plan to deal with this adversity.
6. Teacher gives 20 minutes for writing down this action plan.
7. Teacher asks each group leader to read out their action plan and then highlights the striking positive aspects that each group has imagined.
8. Teacher picks out main points from each groups action plan and writes it on the board.

## ACTIVITY : 7 DRAMATIZATION

### OBJECTIVES :

- To help students to develop endurance in adverse situations.
- To help students to gain control over adverse situations.

**TIME:** 1 lecture (45 mins)

**TIME FOR PREPARATION:** One Week.

### PROCEDURE :

1. Students are selected and roles are assigned to them to be performed in the drama.
2. Students are given insights of the drama and its roles.
3. Dialogues are given to the selected students for practicing.
4. One week time is allotted to them for preparation.
5. The drama is performed in the class on the decided day.
6. Discussion is taken up after the performance of the drama, on the following points:
  - Why did Priya's mother narrate Anil's story to her?
  - How had Anil responded to the adversity in the beginning?
  - What changes took place over him gradually?

- What factors do you think, here, play an important role in his transformation?
- What steps did he take further?
- What experience did you gain from this drama?
  
- Which two options did Anil and Priya have?

What did they choose and what was the final outcome?

7. Teacher puts important striking points of this discussion on the board.

### **SKIT**

**CHARACTERS:** - Mrs. Kashyap

- Priya

- Anil

- Rescue operators

- Doctor

- Sheela George

- Sir. Kutty

- Narrator

---

**Narrator** : Twelve year old Priya was diagnosed with leukemia, a lethal bone cancer. Too young and struck with the gravity of this adversity, little priya was

confused with many questions. She had overheard her Mom telling Dad that she wondered how Priya would cope with this crisis and the doctor had said that she would not be able to be regular at school or other activities. Innocently Priya asked her mother...

**Priya** : Mamma, I don't want to live like this. Will I never be able to lead a normal life, like my other friends.

**Mrs. Kashyap (Priya's mom)**: No my child. You are a strong girl and so sometimes God tests your fighting spirit. Remember, where there is will, there is a way. I know of a young boy named Anil, Who like you was once put through a difficult test. Would you like to know how he fought it bravely?

**Priya** : Yes Mamma. Please tell me about him.

**Mrs.Kashyap** : On one unfortunate day of 11 July 2006, Anil was returning home from Churchgate. He had just received his results and now had managed to secure admissions in a reputed college, with his desired course of study. He boarded the 6:13 Virar local. As the train was nearing Miraroad station, a sudden blast took place in the train. There was a lot of bloodshed. Anil was seriously hurt.

(incident is enacted at the background)

**Rescue operation team** : Let's hurry. Pick them up one by one. Rush. Rush.

**Another rescue member** : Here, he seems to be alive, but he is bleeding profusely. Get a stretcher.

(Amidst cries of pain, Anil is carried away on a stretcher by rescue members)

**Mrs. Kashyap** : Anil was admitted in a government hospital. On examining it was found that his fractured vertebrae was pushed down the spine and hence could not feel any sensation on his body, below his neck. His was a case of quadriplegia, his body was paralyzed. He gained conscious after three long days.

**Doctor** : Good Morning, Anil. I am Doctor Atul Mhatre. We are all here to help you. You will be fine.

**Anil** : Doctor, what is wrong with me? Please tell me? I cannot move my hand or leg? (starts crying )

**Doctor** : Don't be stressed. You will be Okay. For now, You need rest. You have just had major surgery. Relax. Relax.

**Anil** : I cannot move. I cannot feel any sensation. Why did this happen to me? Why me ? What do I do now? I will not be able to walk or eat on my own. My ambition of being a chartered Accountant is ruined. It would have been better to die. ( he again cries bitterly)

**Doctor** : You must not lose hope. Keep your will power steady.

**Mrs. Kashyap** : Days passed and Anil was still depressed. His family and friends found themselves helpless too.

**Priya** : Mamma. I feel sad for Anil. How he must have been feeling with this grief? What could he do ?

**Mrs. Kashyap** : He did. When everybody had given up, suddenly a spark of determination and strong will power surged up in Anil. He began to seek help from all quarters, collected information from friends who came to meet him. He then met Sheela George, a co-ordinator with an NGO, working for trauma victims.

**Anil** : What has happened was beyond my control, but now I can atleast control my response to it. My future is in my hands. I cannot give up so soon.

**Sheela George** : This should be the spirit. Anil, Why don't you learn mouthwriting. I will help you

**Anil** : Will you please teach me mouthwriting ? With that I would be able to develop penfriends and more contacts with the outer world.

**Sheela George** : Why not ? I am glad you want to start fresh. You have to keep practicing very hard.

**Anil** : I will try till I succeed. I will practice hard and learn all you teach me.

**Mrs Kashyap** : With this began his first attempt to be in touch with his friends and other blast victims. Initially for him, Mouthwriting was a big struggle, but later he mastered it. Even his teacher, Sir N. Kutty encouraged his efforts.

**Sir N Kutty** : Anil, I must say that you have a real flair for writing and good language too. Why don't you start writing short stories and essays using a mouth sensitive computer?

**Anil** : Your encouragement has given me new enthusiasm. You have given me new hope. I will definitely try to adapt to a mouth sensitive computer and make best use of my writing skills.

**Sir N Kutty** : I am pleased. Keep up the good work.

**Anil** : I will not quit sir. My desire now is to make my life as usefull and productive as I had dreamt of it earlier. For now I have Learnt "The Greater The Difficulty, The Sweeter The Victory"

**Priya** : Hurray ! Mamma, Anil is so courageous, so brave, a true fighter.

**Mrs. Kashyap** : Yes, He meant what he said. So he began his search for a keyboard modified for his needs and meanwhile uses an electrically operated wheelchair with chin manoeuring to move in his room and house. He has really made his life meaningful, by using his talents to the best of his ability.

**Priya** : I too will not give up. I will give this disease a tough fight. So what if I am terribly ill, I can still make my life happy. I will pursue my hobby of Painting and pottery.

**Mrs. Kashyap** : I am proud of you my child. You will emerge triumphant, I am sure.

## ACTIVITY 8: STORY WRITING

### OBJECTIVE:

- To enable students to restrict the reach of adversity in life.
- To enable students to develop ownership and accountability to take action.

**TIME:** 2 lectures duration (45 mins each)

**STUDENTS:** Eight groups of five students in each.

### PROCEDURE :

- 1) Teacher distributes student in groups.
- 2) Teacher gives each group a sheet of the incomplete story
- 3) Teacher asks them to complete the story giving it a suitable ending.
- 4) Teacher asks each group to read their completed story and holds a discussion on how each group adapted to the situation and what steps they took to lead a fruitful life.

### Story

“ Ravi had a bright career ahead of him. Atleast all his teachers thought so and his parents brimmed with pride on such occasions Ravi had anyways proved himself not only in academics but also in sports. He had been extremely interested in football right from his childhood. He ate slept and drank football. Ravi had many friends but four very close friends. Infact they had named their group as ‘Band of Boys’ and they always hung out together since their school days. Ravi was an all rounder in college and hence a known figure for the teacher as well as most of the students. Infact the year before, he had received the Best

student of the year award in his college. Days passed by happily as time and again Ravi proved his potential and kept shinning in the inter collegiate championship. Now his sixteenth birthday was nearby and he planned a treat for his friends and sought permission from his parents to go to town to watch a movie with his friends. His parents agreed as Ravi was normally a responsible child

On 10<sup>th</sup> August his birthday, Ravi woke up cheerfully and excited. His mother performed an arti and blessed him and his father surprised him with a special gift of a new mobile! Wow! He had wanted it for a long time. Ravi's sister, Saloni, too had brought him a wrist watch as a gift. Ravi enthusiastically left for town with his friends. As decided they'll meet at the ticket counter of the Railway station at 10 am. It was a Sunday and the trains were not so crowded and so the boys stood near the door chatting and cracking jokes. Ravi displayed his new gift to his friend and in his excitement called his cousin to announce his new gift. The voice on the other end could not be heard as there was no proper network coverage and so he walked towards the door and stretched himself a little further. He had just begun the conversations when suddenly his hold on the door handle slipped and in fraction of seconds he fell out of the moving train.

It all happened so fast that his friends could not think of anything but other passengers pulled out the chain to halt and in reaching the site they found Ravi unconscious wounded and bleeding. He was immediately rushed to the hospital and his parents were informed. Doctor performed an emergency surgery and he was saved. But the muscle tear had harmed his Kidneys and the doctors decided that he will not be able to perform rigorous activities that meant that Ravi could not longer play football Ravi thought that it was an end of his dreams, his aspirations But but .....could he really give it up so easily?

Continue it to a suitable end.

## ACTIVITY 9: LEARNING BY SEEING.

### OBJECTIVES:

- To help students to develop Endurance skills during adversities.
- To help students to gain control during adversities.

**TIME:** 3 lectures (45 mins each)

**STUDENTS:** Five groups of eight students in each.

### PROCEDURE :

2. Teacher takes students to the audio-visual room.
3. Teacher informs the students that they will now be shown a movie 'STRANDED', which is based on a real life incident.
4. Teacher tells students to observe the events, the responses and actions taken by the characters.
5. Teacher then starts the movie.
6. After the movie is over, Teacher distributes students in groups.
7. Teacher asks each group to discuss on the guiding points given in the worksheet by her.
8. Each group is given 15 mins for discussion and then the leader presents the points they came up with.

9. Teacher then sums up with the varied responses that each group has given and presents a zest of the depiction of the movie and says that, will power and determination to survive led the characters in the movie to fight the adversities faced by them.

Guiding Points for discussion :

1. What was the adversity?
2. What was their initial reaction?
3. What action did they take to fight it?
4. Did it occur instantly? How long did it take?
5. What changes did you observe in the characters behavior or overall personality?
6. If you were placed with such an adversity, what role would you adopt?
7. Would you consciously make an effort or a rational action plan? Explain?

## ACTIVITY 10: ROLE PLAY.

### OBJECTIVES :

- To help students to develop control over adverse situations.
- To enable students to develop accountability and gain ownership in adversities.

TIME : 1 lecture ( 45 mins )

### PROCEDURE :

1. Students will be selected for role playing.
2. Teacher will explain the students of the roles and the situations that they have to perform.
3. Ten minutes time to be given to the students to prepare their respective roles.
4. Students will then perform before the class.(10 mins will be provided for each performance)
5. Teacher will then conduct a discussion after the role playing activity.
6. Situations given for role playing :
  - There is a sudden train delay in the western railways and you are getting very late for your last paper of H.S.C board exams
  - You are up for an official presentation today and your computer hardware crashes.

7. Teacher takes up a discussion based on the following questions:
  - What do you think of the role adopted by the protégée in the first situation and also the second situation?
  - What experience did you gain from them?
  - Do you think you would have had a different approach? If yes What?
8. Teacher writes down the points suggested by the students and their viewpoints on the board.
9. Teacher informs that through this activity they have learnt the approach one should have during an adversity, the do's and don'ts to be taken care of during a crisis, so that they can take necessary action and develop control over the adversity.

## ACTIVITY 11: HERO WORSHIP

### OBJECTIVE:

- To enable students to take accountability during crisis.
- To enable students to develop control during adversity.

**TIME:** One lecture (45 mins)

**STUDENTS:** 40 Students

### PROCEDURE :

1. Teacher introduces a personality (an ex-student) who has fought through adversities and is winning all the odds that he has faced recently in life.
2. Teachers inform students that he will speak to them and they can later ask questions
3. The invited guest is then asked to narrate this experiences and the events following the adversity he faced.
4. The students then ask him questions pertaining to his experiences and what lessons he learnt from it.
5. Students respond of what struck them most about the person they met?
6. Teacher informs them that the motive to invite this personality was to make them aware of real people and the real situation and how despite of the obstacles emerge as hero.
7. A discussion with students is conducted on what learning experience they got from this activity?

## ACTIVITY 12: LEARN FROM TRUE EXPENRIENCE

### OBJECTIVES:

- To enable students to develop the ability to limit the reach during adversity.
- To enable students to develop endurance skills during adversity.

**TIME:** 2 Lectures (45 mins ach)

**TIME FOR PREPARATION:** One week preparation time.

**STUDENTS:** Five students each in eight groups.

### PROCEDURE :

1. Researcher distributes students in groups and asks them to select a leader.
2. Teacher gives each a task of meeting and interviewing 2 people of their acquaintance, who have faced adversity in real life and have bravely through that crisis.
3. She asks each group's leader to distribute the task work as interviewing, writing and presenting.
4. Leader is given the task of presenting two students set for interviewing and two students prepare a write-up on the collection information.
5. Teacher gives one week time for collecting this information from relevant people.
6. Teacher provides guidelines or question to prepare the write-up and collect information

1. What was the adversity? A short description:-
  2. What was the initial response?
  3. How did it gradually change?
  4. What course of action did they take?
  5. How did they collect resources or available source of help?
  6. What do they feel ultimately, after the struggle?
  7. What message can they give to others through this experience?
7. Teacher then (after a week) asks each leader to present their groups task.
8. Teacher conducts a general discussion based on the following points:
- What did you learn from these people's experience of life?
  - Will it help you to fight, if you come across similar challenges in life?  
How?

**ACTIVITY 13: COLLECTING ARTICLES, REPORTS ANECDOTES  
FROM NEWSPAPERS/MAGAZINES.**

**OBJECTIVE:**

- To enable students to develop endurance skills during adversities.
- To enable students to develop the ability to limit the reach of adversity.

**STUDENTS:** Five groups of eight students each.

**TIME:** One lecture (45 mins)  
One week duration to collect articles/ clippings etc.

**PROCEDURE :**

- Teacher distributes students in groups and asks each group to collect articles, reports, of recent adversities faced by people worldwide.
- Teacher asks students to try and collect reports which have mentioned the reactions and actions of people during this period of stress and turmoil.
- Teacher gives one week time for collecting articles.
- Teacher asks each group to prepare a chart of their collections.
- Each group is asked to read relevant articles collected by their group, especially any striking ones where a due course of action is taken to fight the

adversity or where people have given up before trying or have accepted defeat easily.

- Teachers then asks each group to discuss on the differences observed in these responses to adversities. (If each group does not have relevant articles, other group's collection will be provided to refer.)
  
- Teacher then asks each group to discuss on these points
  - : Where people have won the obstacles, what strikes you the most?
  - : Where people have given up on the difficulties, what course of action would you have taken to overcome these obstacles?
  
- Teacher asks students to remember any obstacles or adversities they have faced in their past and now if given a chance, how would they have reacted or what would be their response to that adversity now?
  
- Teacher asks each group of how this activity helped them, if they could learn from these articles or incidents.
  
- Teacher and students pledge that they will never give up or lose hope, even if they are faced with difficulties or obstacles and never give up before trying to win the challenges in life.

## ACTIVITY 14: SONG OF DETERMINATION.

### OBJECTIVES:

- To enable students to think over ideas and limit the reach of adversity.
- To enable students to develop endurance abilities during adversities.

**TIME:** 2 lectures (45 mins each)

**STUDENTS:** Five groups of eight students in each.

### PROCEDURE :

1. Teacher explains the recent adversities our country as a whole is facing and stresses on the need of unity and internal peace to get over this adversity.
2. Teacher then puts up a chart, with the song ‘HUM HONGE KAMAYAAB’ written on it.
3. Students are asked to explain the theme of this song and how it motivates them to be triumphant against all odds.
4. Teacher teaches the tune of the song.
5. Teacher asks each group to stand in circles and hold hands as they sing the chorus together.
6. Teacher then puts up an adverse situation before students as she reads the headline of a recent adversity having struck our nation :

**‘BLASTS IN HYDERABAD’**

7. Each group is asked to discuss and put pot suggestions, measures to be taken to overcome this situation and get over it's fear.
8. Relevant to the ability to win over this obstacle, students holding hands, together sing the first stanza.

“ Nahi darr kisika aaj,(2)Nahi dar kisika aaj ... ek din

Oh ho man mein hain vishwas ,pura hain vishwas

Hum honge kamayab ek din”.

9. Teacher similarly reads out two other headlines, referring to adversities recently struck and holds discussion in groups :

**‘FLOODS IN BIHAR’**

**‘UPROAR IN KASHMIR VALLEY’**

10. Relevant to these diversities and significant to win over them, the students sing the next two stanzas of the song.
11. Teacher puts up the main points and suggestions given by students to win over these adversities and then the teacher and students together sing the entire song.

## ACTIVITY 15: CROSSWORD

### OBJECTIVE:

- To enable students to understand the quantities that play an important role to develop the four dimension of AQ.
- To enable students to know the importance of these quantities determining and relating to the four dimensions of AQ

**TIME:** 2 lectures (45 mins each)

**STUDENTS:** Five group of the eight students each.

### PROCEDURE :

1. The researcher tells the participants to divide themselves into 5 groups of eight students each and to select a leader for their group.
2. Each group of the students is given a copy of the crossword puzzle by the researcher that is related to the characteristics of the four dimensions of AQ
3. Researcher gives each group 40 mins to solve the crossword puzzle.
4. After the deadline of 40 minutes the students are asked to stop and the researcher gives the solution of the crossword to the group in order for them to check their answers.
5. The Researcher then proceeds to help other groups who have difficulty in completing the crossword for the next 10 minutes.
6. The researcher asks participants to now reflect on how they think these qualities given in the crossword are helpful in life.

7. The researcher asks each leader to conduct discussion in his respective group of how these qualities are essential to fight challenges or adversities in the life. (They can give personal examples)
8. The researcher then asks each group to assess their strengths (relating to the presence or absence of these qualities in themselves) and weakness and remember to develop their flaws into strong points.

Clues to fill the Crossword puzzle.

**Across**

- 2) Waiting calm and quiet for very long – (8)
- 3) Readiness to recover from depression or any setback - (10)
- 6) Looking at the things positively/ hopefully – (8)
- 7) Dedicated involvement to a course of action (pledge oneself)
- 9) Making purposeful resolution or fixed intention (try hard continuously) - (13)
- 11) Taking initiative, (to guide or direct) -(4)

**Down**

- 1) One's expectation and desire-(4)
- 4) Continuing to do something inspire of obstacles-(11)
- 5) Taking responsibility
- 8) Provide inducement or encouragement-(10)
- 10) Vigor attempts at taking the trouble-(6)

# CROSSWORD PUZZLE

