

Attainment of Graduate Attributes 11 of NBA for Post Graduate Program through course assignment

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Abstract - The National Board of Accreditation (NBA) format outlines a set of eleven graduate attributes (GA) to be acquired by the students of post graduate programs in engineering education. Out of the eleven GAs, GA-11 seemed to be intriguing and a challenge to incorporate in engineering curriculum. GA-11 emphasis on “independent and reflective learning” by the students through observation and examining critically the outcomes of one’s actions and makes corrective measures subsequently, and learn from mistakes without depending on external feedback. To address the GA-11 in the PG program of production management, program outcome 11 was developed; PO-11 focuses on developing the ability to critically self examine and assess oneself for self awareness. The PO-11 was addressed by the way of assignment task given to the students to critically self examine themselves using the concept of SWOT analysis taught in the course curriculum of “Strategic Management” for production management post graduate program of BVCET and present the same.

Keywords— Graduate Attributes, SWOT analysis

I. INTRODUCTION

Graduate attributes (GAs) form a set of individually assessable outcomes that are the components indicative of the graduate’s potential to acquire competence to practice at the appropriate level. The GAs of the PG program are examples of the attributes expected from a graduate of an accredited program. The graduate attributes of the PG program of NBA are as follows.

- ❖ Scholarship of knowledge
- ❖ Critical thinking
- ❖ Problem solving
- ❖ Research skill
- ❖ Modern tool usage
- ❖ Collaborative and multidisciplinary work
- ❖ Project management
- ❖ Communication
- ❖ Lifelong learning
- ❖ Ethical practices and social responsibility
- ❖ Independent and reflective learning

The NBA insists that the programme outcome (POs) formulated must be consistent with the Graduate Attributes. This paper focuses on the attainment of the

Graduate Attribute 11, which emphasizes on independent and reflective learning to the students of the PG program in production management. Stephen. R Covey in his book titled “Seven habits of highly effective people” emphasis on the importance of self awareness to be effective and successful[3]. To attain this attribute “ability to self examine and assess for self awareness” was formulated keeping in tune with the graduate attribute stated by the NBA. Two PIs (performance indicators) were selected which are as follows:

- ❖ Discuss the personal strength and weakness
- ❖ Assessment of opportunities and threats in the environment for one self.

Attempt was made to attain the above program outcome through a assignment task given to the students as a part of their continuous internal evaluation in the theory course “Strategic Management”

II. STRATEGIC MANAGEMENT

The course on Strategic Management emphasis on imparting knowledge on thinking strategically about organisational issues and develop strategic plans in the organisation. The students learn to develop vision and mission statements and carry out various analysis like SWOT analysis and PEST analysis before formulating a strategy.

III. SWOT ANALYSIS

SWOT is an acronym used to describe the particular strength, weakness, opportunities and threats that are strategic factors for a specific company. The SWOT analysis framework has gained widespread acceptance as it is both simple and powerful for strategy development. The factors affecting an organization can usually be classified as

1. *Internal factors*-strength (S), weakness (W)
2. *External factors*-Opportunities (O), Threats (T)

Internal factors- strengths are positive, tangible and intangible attributes, internal to the organisation. They are within the organisational control. Weaknesses are the factors within the organisation control that are detracting from the ability to attain the core goal. In which the areas the organisation can improve.

External factors-opportunities are external attractive factors in the environment which can be harnessed to propel the organisation. Threats are the external factors beyond the control of the organisation, which puts organisation's mission or operations at risk. The SWOT matrix is shown in Fig. 1[1,2]

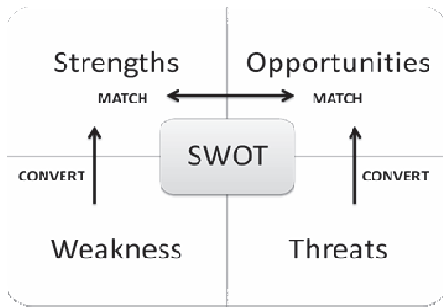


Fig. 1. SWOT matrix

IV. LINKING SWOT ANALYSIS AND THE INDIVIDUAL

The students are taught to carry out the SWOT analysis for an organisation to formulate strategies to overcome weakness and improve on their strengths. This helps an organisation to formulate appropriate strategic plans to meet the future challenges. As a part of continuous evaluation an assignment to carry out their SWOT analysis detailing their individual strengths, weakness and also to identify the opportunities and challenges they may face in their future. The students were also asked to match the strength and weakness to opportunities and threats. The students were asked to make a PPT PRESENTATION of their individual analysis and they were evaluated using suitable rubrics. The questions asked is presented in Table 1

PO11: Ability to critically self examine and assess for self-awareness
<i>OE (i) Possess the intrinsic attitude for continuous improvements through learning from own mistakes; mistakes of others and the ability to assess ones own strengths and weaknesses.</i>
a1]Discuss personal strengths
a2]Discuss personal weaknesses
b1]Assessment of opportunities in the environment
b2]Assessment of threats in the environment
b3]SWOT analyses and future strategies to overcome threats and avail the opportunities in the environment
<i>OE (ii) Degree of awareness of the global, economic, environmental and societal impact of engineering solutions in product and process design</i>
a) Recognize the impact of professional decisions regarding product/process design on the society and ecology
b) Consider the societal and ecological constraints in the product/process design

V. CASE STUDY

The following analysis was carried out by one of the students

SWOT (Strength, Weakness, Opportunities and Threats) Analysis is important tool not only to judge the current situation and objectives of the business but also used to determine our objectives with respect to strength and weakness. Personal SWOT analysis helps to analyse and probe myself deeper. I hope to use this personal SWOT as tool of self awareness and personal development.

MY STRENGTHS ARE AS FOLLOWS:

- ❖ My faith in almighty: This is my first strength that I believe in god, who gives me power to face hurdles or challenges that come in life.
- ❖ My parents: It makes me proud that I have a supportive parent. They support me in even bad situation.
- ❖ Patience: I am being calm and cool helps me to do my works properly.
- ❖ Technical savvy: I normally try to understand technical work for any kind of machine and
- ❖ having knowledge of computer which makes me confident.
- ❖ Flexible: Able to adapt to changing conditions naturally without complaints.
- ❖ Good Leadership Skills: I sometimes realize that I have leader ship skill too, because in my friends circle they always give me a change to light their path and they follows me, which shows that I can lead them in a right way.
- ❖ Meditation: Since I do meditation daily, it helps me to concentrate on my work and being healthy.
- ❖ Avid for Learning: I am always eager to learn from others mistakes because it is always better than making mistakes myself and learning from them.
- ❖ Do it Right the First Time: I believe if something is worth doing, it is worth doing correctly. Work should be done correctly and efficiently, don't try do it for the name sake.

MY WEAKNESS ARE AS FOLLOWS:

- ❖ I get distracted by too many things around me, which deviates my mind and kills the precious time during work schedule.
- ❖ Sometimes I become egoistic which is to be regarded as best.
- ❖ Whenever certain important critical decision is to be taken, I am not able to judge that situation accurately.
- ❖ Not able to spend enough time in recreational activities (such as chess, reading novels, cricket, yoga, playing basket ball, morning walked.)
- ❖ Most of the time, I think from the heart and not from the brain, which is harmful to me.
- ❖ I don't wake up until my sleep is comfortable.
- ❖ I will become little aggressive when my group or any one does not support me.

- ❖ I am quietly addicted too much having coffee many times a day.

MY OPPORTUNITIES ARE AS FOLLOWS:

- ❖ After getting admission to BVB engineering college, I got opportunity to improve my communication, skills and to learn about new advancement in business environment and to carry out the projects efficiently and effectively.
- ❖ To pay back to my parents in the form of best happiness with my capacities.
- ❖ To evolve as multitasking individual that I can perform many jobs like being a student and being an athletic and good citizen.
- ❖ I can learn practical life of corporate world which would help me in vast future life of full of commitment
- ❖ Since there are students from different places in spite of this, I can understand the different culture, tradition and language, easily which help in improving my strengths and able to adjust to changing situations.

MY THREATS ARE AS FOLLOWS:

It is absolutely right there are many threats for me, they are

- ❖ Since from childhood to till date I had had performed well in all academic activities well but I have stage fear while giving presentation.
- ❖ As in today's competitive world everyone needs a good job and huge amount of money so I want a good placement through which I am able to survive my life but I am not only who need this, there are many students who are looking for the same which increases the lot of competition for me.
- ❖ My own personality: My personality is one of my enemies. Sometimes I get confused about what to do or what not to do. I often get trapped in ambiguous decisions of my own. I am not able to identify the good and bad things around me.
- ❖ Rat and cat competition: Since I am facing tough competition in this corporate world, I often get afraid that I may get fragile with rigorous competition.

MATCHING MY STRENGTHS AND WEAKNESS WITH OPPORTUNITIES AND THREATS

Whenever I get opportunity, I will make best use of my strengths (such as good communication, flexible, good leadership, skills, etc...) and improve my characteristics and show a good attitude to others. I will try to convert my weakness into strengths which gives me power to face the competitive world and can have a competitive edge over my competitors, so that threat can be reduced through opportunities. – *student*

VI. STUDENT ATTAINMENT

The student attainment was measured by two performance indicators (PIs) 1A and 1B. The attainment values are shown in Table 2 and depicted in Fig. 2. From the attainment values, it can be observed that attainment level of 1A is higher than that of 1B. It shows that students have focused more on identifying their strengths and weakness compared to identifying the opportunities and threats, which are in the environmental and not in their control.

Table 2: Percentage Attainment of PO11

% Attainment	
1A -Discuss strength and weakness	85.00
1B -Assessing opportunities and threats	78.75
Overall Measurement of PO11	81.88

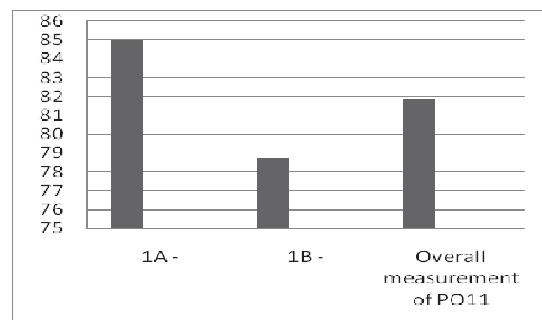


Fig. 2 Student Attainment

VII. FEED BACK ON EFFECTIVENESS

Feedback on effectiveness is taken by the students. It is observed that the maximum students strongly agree to question 1 that is related to self awareness and maximum students only agree to question 2, which is connected to strategical thinking about themselves. This indicates that the students strongly agree that the assignment helped in creating self awareness.

VIII. CONCLUSION

From the above discussion of performance indicator attainment and student feedback on the effectiveness of the assignment task it can be concluded that the objective of attainment GA-11 is satisfactory

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