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The Growth of Leadership Potential of Engineers; A Case Study

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Abstract: As the global workforce increasingly emphasises interpersonal skills along with technical skills, engineers face the unique challenge of expanding their leadership and communication capabilities. The aim of this study is to examine how the collaboration with Toastmasters International, a global organisation dedicated to public speaking and leadership development, has supported and catalysed the growth of the leadership potential of Sri Lankan engineers as a case study. An online face-to-face interviews were conducted with 20 Sri Lankan engineers who worked with Toastmasters International to achieve the aim of this study. Voice-recorded interviews with the consent of the interview participants were transcribed verbatim and analysed using NVIVO software employing the thematic analysis method. This study has revealed that engineers' experience and engagements with Toastmasters have helped them to improve confidence, communication skills, experiential learning, networking, and transformation that foster their leadership potential to the next level in their professional work environments. They have realized the drastic improvement in their leadership potential was catalysed with the Toastmasters engagements. Hence, this study confirms Toastmasters as a proven pathway to transformative growth of the leadership potential of Sri Lankan engineers. However, further studies are needed to investigate the range of leadership development opportunities available within society, with the aim of identifying the most effective approaches for cultivating leadership among professional engineers. Integrating such frameworks into undergraduate engineering curricula has the potential to significantly enhance the leadership competencies of future engineers in Sri Lanka.

Keywords: Engineers, Leadership, Sri Lanka, Toastmasters

1. Introduction

Engineering practice in contemporary professional environments increasingly requires leadership, communication, and interpersonal competencies in addition to technical expertise. However, traditional engineering education places limited emphasis on systematic leadership development, creating a gap when engineers transition into roles that demand team management, stakeholder engagement, and decision-making. This challenge is particularly evident in the Sri Lankan context, where engineers are expected to assume leadership responsibilities in complex and multidisciplinary work settings without adequate formal preparation.

To address this gap, many engineers seek external platforms for leadership development. Toastmasters International is a globally recognised organisation that provides a structured, experiential, and peer-supported environment for developing communication and leadership skills. Unlike short-term corporate training programmes or formal executive courses, Toastmasters offers continuous learning through practical leadership roles, constructive feedback, and reflective practice. Although alternative leadership development programmes are available, they are often constrained by cost,

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limited accessibility, or short-term engagement. Empirical evidence examining the effectiveness of such programmes for engineers in Sri Lanka remains limited.

This study explores how engagement with Toastmasters International supports the growth of leadership potential among Sri Lankan engineers. The scope is confined to engineers actively involved in Toastmasters, using a qualitative approach to capture in-depth experiences. The findings contribute empirical insights into informal leadership development mechanisms and offer implications for engineering education and professional development in Sri Lanka.

2. Literature Review

The purpose of this review of the literature is to explore more areas of leadership development of engineers and the contribution of Toastmasters International for such purposes through past scholarly works.

2.1 Leadership Development of Engineers

Research has shown that engineers often face challenges when stepping into leadership positions due to the lack of required communication training in engineering programmes [1]. Because traditional engineering courses emphasise technical rather than interpersonal skills, there is often a lack of leadership skills, such as managing people, solving conflicts, or leading project teams [2]. This gap not only limits individual career progression, but also limits organizational success because only technical knowledge is not enough to effectively manage multidisciplinary teams [3]. This requirement is widely identified by engineers, and many of them are looking for opportunities to improve their leadership potential to suit industry requirements [4]. In today's competitive business world, no engineer can survive in the field without possessing the essential leadership capabilities [5]. According to [6], the knowledge of engineering leadership is growing, but this knowledge is limited by the editing of programme evaluation, rather than empirical methods, the treatment of descriptive rather than analytical data, and excessive attention to engineering management. However, the earlier the development process begins, the longer time is available to develop leadership roles. To succeed, young engineers must grow quickly in this role. When young engineers develop leadership skills in their early careers, everyone wins [7].

2.2 Overview of Toastmasters Programs

Toastmasters International is a non-profit organisation that aims to improve people's public speaking, leadership, and communication skills. Through the structured meetings and various programmes, members engage with a series of projects that aim to build these skills [8]. Currently, Toastmasters International provides six pathways, including "Dynamic Leadership" to enhance the communication and leadership skills of its members. [9].

2.3 Key Toastmasters Activities for Leadership Development

2.3.1 Public Speaking Projects

Public speaking is a core function of Toastmasters and provides engineers with essential practice for delivering complex information in a clear and digestible manner. Engineering leaders are often asked by their non-technical stakeholders to explain complex technical issues [10]. Toastmasters require members to present speeches on various topics, giving them ample opportunities to improve clarity, brevity, and engagement with audience in their communication.

2.3.2 Evaluation & Feedback Exercises

In Toastmasters, feedback is a core component in which members constructively critique speeches. This practice promotes a growth mindset and improves self-awareness, attributes that are essential for leadership [11]. For engineers who are used to an environment based on facts, right or wrong, this experience develops their ability to provide constructive feedback, which is an essential component of leadership to foster team growth [6].

2.3.3 Leadership Roles within Clubs

Toastmasters also offer members leadership opportunities in clubs where they can play leadership roles such as President, Vice-President of Education, and other leadership roles. Each position requires the management of club operations and fosters key leadership skills such as team management, strategic planning, and conflict resolution, which are directly related to engineering management responsibilities [5].

2.3.4 Mentorship Opportunities

Mentoring is strongly encouraged in Toastmasters. Experienced members mentor

newcomers and promote an environment of support to promote mutual growth [9]. The engineers in these roles develop empathy, active listening, and leadership abilities, which are invaluable to team leadership. Furthermore, mentors strengthen their knowledge and strengthen leadership confidence [7].

2.3.5 Collaborative Projects

Some Toastmasters pathways require members to participate in collaborative projects, such as the organisation of events or group presentations. These exercises teach engineers the skills necessary to effectively coordinate, delegate tasks, and make collective decisions for managing engineering teams and cross-functional projects [5].

2.4 The Growth of Toastmasters in Sri Lanka

Sri Lanka's Toastmasters movement started in 1983 with the establishment of the Colombo Toastmasters Club, the first Toastmasters Club in South Asia, and belongs to the District 82 Toastmasters International. Today, District 82 encompasses all clubs across Sri Lanka, Maldives, and the British Indian Ocean Territory, with over 3500 members across more than 150 clubs including corporate, community, and university clubs. Currently the organization now local and international clubs, creating networks that help Sri Lankan professionals connect with other colleagues from all over the world [12].

Many Sri Lankan Toastmasters clubs are organised by engineering organisations, universities and multinational corporations, indicating the importance of communication and leadership skills in these sectors. There are few Toastmasters clubs in Sri Lanka whose member base is specifically composed of professional engineers. As examples, the IESL Toastmasters Club and Voice Your Dream Toastmasters Club can be mentioned. This rapid growth reflects the growing demand among Sri Lankan professionals, especially engineers, to develop soft skills that often do not fall within the scope of traditional engineering. Although Toastmasters has gained popularity in Sri Lanka, there are still some challenges. Many engineers may hesitate to join a public speaking organization because they do not recognise the advantages of leadership. Additionally, logistical challenges, such as balancing professional commitments and regular Toastmaster meetings, can hamper participation.

Although Toastmasters International has gained wider popularity among Sri Lankan professionals, including engineers, systematic scholarly investigations conducted to explore its impact on professional development are very rarely observed. Therefore, this study was conducted to explore how the collaboration with Toastmasters International has supported and catalysed the growth of the leadership potential of Sri Lankan engineers.

3. Methodology

Since the Sri Lankan context lacks previous studies conducted on this matter, a qualitative approach is the most appropriate method to explore this type of research problem [13]. Not like quantitative research designs, qualitative approaches can identify previously unknown facts relevant to the study [14]. Convenience sampling was adopted due to the absence of an accessible database identifying professional engineers in Sri Lanka who maintain active membership with Toastmasters International. Additionally, this sampling technique was appropriate for this exploratory qualitative study, as it enabled the collection of rich, experience-based insights from information-rich participants within a specialized and hard-to-reach population. Further, it is a method of collecting data from samples that are conveniently located around the researcher [14]. Based on that, the authors of this study used their personal network to identify possible respondents and collect data from them. The authors identified around 20 engineers in Sri Lanka who maintained membership with Toastmasters International through local Toastmasters clubs. First, they were contacted via a phone call and explained the purpose of this study. Once they agreed to participate in the data collection process, interviews were conducted via Zoom platform and recorded them for analysis with their consent. Interviews lasted for 20 to 30 minutes. Interview recordings were transcribed verbatim while skipping the personally identifiable factors like name, workplace, etc. to secure the confidentiality of the participants.

Thematic analysis, a flexible data analysis method that can be utilized to analyse interview data was used in this study [15], [16]. Interview transcripts were uploaded to the NVIVO software for the analysis purposes. Before starting the analysis, the responses were read several times to get familiar with the data. Then, the open coding process was started by

assigning labels to the responses based on the meaning of the content with the support of the NVIVO software. Later, they were grouped into main themes to fulfil the aim of the study [16].

4. Results & Discussion

All respondents received a number starting from number 1 based on the order of the responses received. The essential demographic findings about the respondents were as follows.

Out of the respondents, 50% were female engineers and 50% were male engineers in the Sri Lankan industrial sector. Their employment sector-wise distribution is demonstrated in Figure 1.

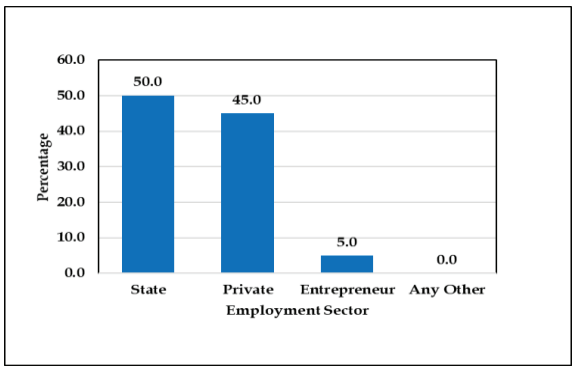

Figure 1 - Employment Sector

According to the Figure 1 above, half of the respondents were employed in the state sector and 45% were employed in the private sector. Only 5% of the respondents were entrepreneurs.

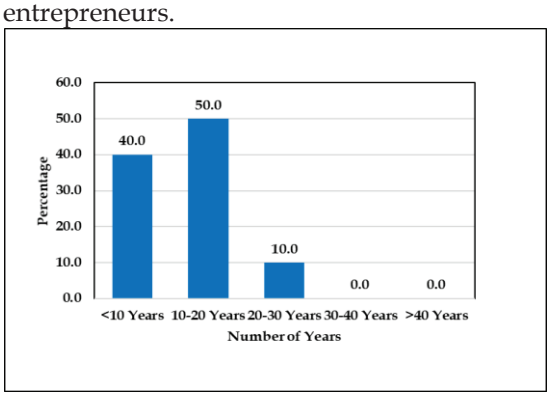

Figure 2 - Industrial experience

According to the graph shown in the Figure 2, 40% of respondents have an industrial experience of less than 10 years and 50% of respondents have industrial experience between 10 and 20 years. Only 10% of the respondents have industrial experience between 20 and 30 years.

The graph displayed in Figure 3 demonstrates the Toastmasters experience of the respondents in years. 50% of the respondents have less than 2 years of Toastmasters experience while 20% of respondents have Toastmasters experience between 2 years to 4 years. Only 5% of the respondents have Toastmasters experience between 4 years to 6 years and the remaining 25% of respondents have Toastmasters experience over 6 years.

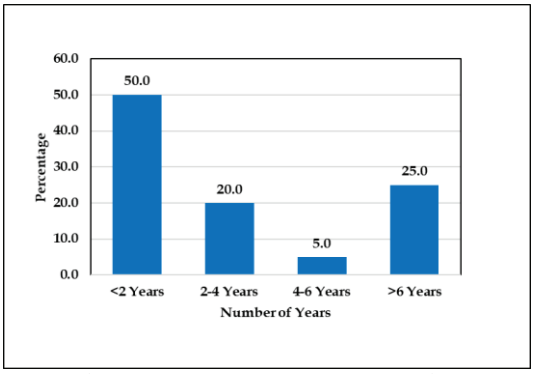

Figure 3 - Toastmasters Experience

The below section is dedicated to discussing the findings on the contribution of Toastmasters engagements to enhance the leadership potential of engineers in Sri Lanka.

4.1 Toastmasters contribution for Growth of Leadership Potential

Thematic analysis of the interview transcriptions has revealed that the engagements in the Toastmasters activities have supported in improving the confidence, communication skills, experiential learning, networking, transformation, and critical thinking which foster their leadership potential to the higher level. Each theme is discussed in detail in the following sub-sections.

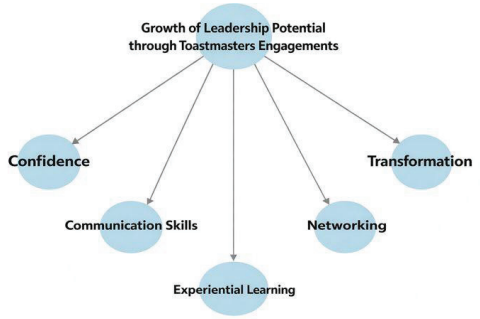

Figure 4 - Thematic diagram for leadership growth

4.1.1 Confidence

Self-confidence is an essential factor for any leader to carry out his leadership role

effectively [17]. Toastmasters' experience has supported Sri Lankan engineers to improve their self-confidence in various ways.

"Furthermore, taking up club leadership positions like President etc, help us to develop our leadership skills. It is like running a company. We have to face many challenges in those activities. That valuable experience boosts our confidence to be a good leader in our professional life." (Participant #1)

According to the above extract, participant 1 sees being the toastmasters club president and running it as similar to a running a company. It seems to be a prepractice session for any budding leader since club leadership roles give a valuable leadership experience to them while training them to overcome numerous obstacles like achieving key performance indicators of a successful club. That experience has boosted the self-confidence of engineers who serve in club leadership roles.

"Toastmaster experience developed my confidence and skills on leadership, my fear of leading has come to near zero after I actively involved in toastmaster activities." (Participant #10)

Participant 10 also has confirmed the same. Especially, he/she has emphasised that fear of taking the leadership roles in the professional capacity got reduced to null with the active involvements with the toastmasters activities while improving the confidence. Serving in the roles like general evaluator, table topic master and toastmaster of the day, which are other than the club executive committee roles, also allow members to practice leadership by managing meetings, guiding discussions, and overseeing club operations. These experiences contribute to a practical understanding of organisational dynamics and decision-making [18].

"Toastmasters gives a safe space to practice all the skill needed for leadership with the right guidance. Leadership learnings from toastmasters can very effectively be applied in the outside work." (Participant #15)

Participant 15 also is in the confident mindset with the firm belief that the leadership experience got from the toastmasters' experience can be applied in the day today professional life. Confidence is an essential element of effective leadership, and the cultivation of this trait requires practice and support. Toastmasters International provides individuals with a unique platform to build leadership confidence through structured practices, peer feedback, and progressive challenges.

4.1.2 Communication skills

One of the core components of Toastmasters is the ability to speak in public [8], which is closely related to the effectiveness of leadership [3]. Leaders often need to speak confidently in front of stakeholders, to present convincing ideas, and to address large groups.

"The ability to provide constructive feedback, cultivated through evaluations, has not only enhanced my communication but also my understanding of effective critique. Moreover, navigating speeches, especially in international settings, has improved my articulation, making me adept at concise, impactful pitching while mastering time management." (Participant #4)

According to participant 4, he could improve his communication skills to a better level by involving himself in delivering speeches and receiving feedback for them as a core function of a Toastmasters' meeting [9]. Furthermore, competing for the speech contests has further enhanced the communication skills of an engineer, as emphasised above. Members improve their public speaking skills by regularly giving speeches and receiving feedback, which directly increases their confidence in addressing the audience. This confidence, in turn, reinforces their confidence in leadership in other areas, including interpersonal communication and team management.

"Regular public speaking and feedback sessions improve clarity and confidence in communication." (Participant #20)

Participant 20 also has emphasised that the public speaking and feedback opportunities available in Toastmasters meetings enhance communication skills, which directly increase the leadership potential of any member in the Toastmasters fraternity. Leaders emerging from Toastmasters programmes are often more capable of inspiring teams, communicating clear visions, and directing strategic initiatives because they have gained confidence and competence through Toastmasters activities.

4.1.3 Experiential learning

Many respondents have highlighted experiential learning as a key benefit they experienced from Toastmasters' engagements for their leadership development. Toastmasters

offers an alternative educational experience that has been recognised for its impact on personal and professional growth through the development of public speaking and leadership skills through experiential learning [19].

"I always try to practice whatever I learnt in toastmasters at work. Specially time management, obtaining maximum output from each employee in my team, planning process, handling human resource issues are some of the things that I learnt from toastmasters." (Participant #11)

According to Participant 11, he could directly apply and practice what he learnt from Toastmasters into his professional life. That is a great benefit that he had from the experiential learning of the Toastmasters. The theory of experiential learning (ELT), proposed by Kolb in 1984 [20], emphasises learning as a process of knowledge creation by transformation of experience. The model consists of four phases of concrete experience, reflective observation, abstract conceptualisation, and active experimentation. Through a repeatable commitment to these stages, people not only gain knowledge, but also develop practical skills and insights that apply to the context of the real world [21]. The structure of Toastmasters International's programs is closely aligned with the principles of experiential learning. Members follow a structured educational path, called pathway learning program that includes public speaking and leadership components. Each meeting aims to provide a series of hands-on experiences, reflection opportunities, and peer feedback, which will strengthen the learning cycle described by Kolb [19].

"Toastmasters program enables numerous opportunities to enhance leadership. Working as an exco member, working in a district leadership position provides you great opportunity to expand your leadership capacity." (Participant #17)

Participant 17 also further clarifies the experiential learning opportunities available in Toastmasters program to improve the leadership potential of engineers in the above narrative. Leadership as a skill is largely benefited by experiential learning because it is developed by practice rather than theory. Experience that requires decision making, problem solving, and teamwork is at the core of building leadership competence [22]. For engineers who often work in technical or isolated roles, the learning experience of the Toastmasters framework can expose them to a variety of challenges and interactive experiences to foster leadership abilities in a low-risk environment.

4.1.4 Networking

Study participants have realised that networking opportunities they received through Toastmasters engagements have been an immense support to develop their potential as an emerging leader in the industry. For engineers, networking offers unique benefits, including mentoring, access to resources, and career opportunities. Studies have shown that engineers who actively engage in networking have a more likely chance of success in leadership roles, since they gain a broad perspective, a broad network of professional connections, and a wider range of cross-disciplinary ideas that can improve problem solving and adaptability [23].

"Since toastmaster is a worldwide network, best thing is to connect with outside club meetings in different regions/countries as much as possible with meeting roles. That is the best way to improve leadership skills with new people." (Participant #16)

The presence of a worldwide network of toastmasters helps Sri Lankan engineers to expand their network with a variety of professionals in other countries by participating in toastmaster activities. Toastmasters clubs are organised in chapters around the world, providing access to a vast supportive community of members. Members interact with each other in a formal or informal way and build relationships over time through structured communication exercises and collaborative activities. However, engineers often lack structured opportunities to develop networking skills, as engineering training usually focusses on technical content rather than building interpersonal skills. Toastmasters provides solutions by providing a structured environment to encourage regular interaction, collaboration, and feedback between members of various backgrounds. This environment promotes the establishment of relationships, which are vital for the development of leadership qualities [19].

"Networking and Collaboration: Working with diverse members fosters teamwork, mentorship, and the ability to collaborate effectively." (Participant #3)

Participant 3 also confirms the same through the above narrative. As engineers assume more leadership responsibilities, the need for strong network skills becomes paramount. The Networking in Toastmasters program provides engineers with a unique opportunity to develop and practice leadership skills in structured and supportive environments. This collectively contributes to a more complete set of skills that are important for engineers seeking leadership positions.

4.1.5 Transformation

It is revealed from this study that toastmasters' engagements have transformed the engineers to better personalities which is an essential pre-requisite for a better leader. Personal transformation often involves a change in self-perception, value, and behaviour due to reflective practices and feedback [24]. For engineers, personal transformation can lead to the development of leadership qualities such as confidence, emotional intelligence, adaptability, and resilience. Studies have shown that leaders who grow in their own lives are better equipped to inspire, motivate, and manage others [22]. Through regular participation, structured feedback, and experiential learning, Toastmasters provides engineers with the opportunity to reflect and improve these aspects of personal development.

"It has helped me immensely and transformation within me reflects the impact of the Toastmaster experience over the last 8 years. Specially the way I manage people, planning projects, and building high-performing teams are such examples in which toastmaster experience helps me to sharpen me." (Participant #2)

The above narrative is a clear example to demonstrate how toastmaster experience transforms engineers to deliver their best as leaders. As he knows the benefits, he maintains the membership with Toastmasters International for a longer period, like 8 years. Toastmasters follows a structured model of self-directed learning and peer feedback, establishing a framework for personal transformation. Members choose educational pathways that match their personal and professional objectives, and each meeting provides repeated opportunities for self-expression, reflection, and adaptation [9]. For engineers, the development of confidence in speaking publicly is crucial because it empowers them to lead teams, communicate ideas effectively, and communicate with various stakeholders. According to [9], anyone who participate in public speaking at Toastmasters report a significant improvement in self-confidence, which means a greater leadership and self-awareness in the workplace.

"Always I value the qualities I saw in most of the Toastmasters characters, and I try to apply those qualities to my professional life and personal life." (Participant #6)

Participant 6 has identified the notable personality traits within most of the other toastmasters in the society and became fascinated with such characteristics. Therefore, he also participates in Toastmaster activities to adopt such good qualities to himself. Respondent 6 is self-aware of his own personal and professional development. Self-awareness is the foundation of personal transformation and is at the centre of Toastmasters' experience. Engineers perform self-assessment exercises, evaluate their own progress, and reflect on feedback received. This reflection practice strengthens self-awareness and helps engineers identify strengths and areas for improvement. This provides clarity on leadership styles, communication preferences, and interpersonal tendencies [21]. The development of self-knowledge is consistent with transformational learning theory and emphasises the importance of critical reflection in achieving personal growth [24]. By actively conducting a self-assessment, engineers develop a growth-orientated mindset that allows them to play a clearer and more reliable leadership role.

5. Conclusions

As the engineering profession continues to require leadership skills in addition to technical expertise, having an effective and a structured mechanism for the leadership skills development of engineers is becoming increasingly demanding. This case study has shown that Toastmasters International has provided a unique environment to support Sri Lankan engineers in developing effective leadership skills by increasing confidence, communication skills, experiential learning, networking, and personal transformation. By participating in Toastmasters activities, Sri Lankan engineers can undergo personal transformations that enable them to become leaders in various industries, closing the gap between technical and interpersonal skills. Therefore, it can be recommended for Sri Lankan engineers to engage with Toastmasters

International to grow their leadership potential, which is a demanding skill in any workplace.

In the future, a comparative study should be conducted to deeply analyse the significant impact of Toastmaster engagements on overall professional success of engineers by selecting two sample groups that have and not having Toastmasters experience in the Sri Lankan context to be more precise on the above recommendation. Further research is warranted to investigate alternative leadership development mechanisms available to graduate engineers in the country, with a focus on evaluating their overall effectiveness. Integrating such frameworks into undergraduate engineering curricula has the potential to significantly enhance the leadership competencies of future engineers in Sri Lanka

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