

# Producing Millennial Generation Leaders in Addressing Change and Meeting the Challenges of the Industrial Revolution 4.0

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**ABSTRACT:** The millennial generation is the next generation that dominates the workplace and future generations faced with many uncertainties in technology, society, and the workplace as well as business challenges. The industrial revolution 4.0 has demanded leadership to rethink the role of the millennial generation in organizations, think more systematically and humanistically about how to lead the next generation. The study of transformational leadership in the manufacturing industry shows that organizations need mutual benefits from the spirit of inspiring, advocating, empowering, and communicating effectively throughout the organization for future success. Leadership transformation refers to the goal of equipping workers with confidence and the ability to adapt and become more innovative at work; thus the development of leadership programs becomes a critical factor in determining what leadership development looks like and how significant the leadership role is for the success of the organization's future sustainability.

*Keywords:* Transformational Leaders, Millennial Generation, Industrial Revolution 4.0

## 1 INTRODUCTION

The millennial generation is a future generation faced with many uncertainties and business challenges. The Deloitte survey explains how millennials aspire organizations to prioritize ethical treatment of people, 50% of the millennials surveyed claim that they want to work for businesses with ethical practices above other business obligations (Deloitte, 2014). Deloitte's survey shows that millennial generation tends to carry out a difference. Millennials believe that the success of a business, in this case, is more than just about financial performance, which focuses on improving various critical things that society must strive to achieve. In addition, most millennial (74%) believe business has a positive impact on society by generating jobs (48%) and increasing prosperity (71%), thinking businesses can do more to address community challenges in specific fields namely scarcity of resources (68%), climate change (65%), and income equality (64%) (Deloitte, 2014).

In order for the manufacturing industry to be attractive and able to survive in the millennial era, it is de rigueur to overcome the problem of perception and strengthen workplaces that meet the needs of the millennial generation. Where Millennials, in their own way, redefine what constitutes their work ethic and application; the centrality of work and its relative importance; and the value of leisure and place in life. (Campione, 2015, p. 71)

How millennial leaders in the manufacturing industry believe that organizations contribute to the development of leadership skills needed to lead, attract, maintain, and produce the millennial workforce in the coming years. Next, how the current leadership development is needed to lead, attract, and sustain a growing millennial workforce.

At present, the manufacturing sector has quite exciting problems related to the millennial era, due to a growing perception that the industry can only provide low wages. Woods outlined several millennial generation preferences in the workplace environment, raising the question of whether

manufacturing organizations meet those preferences and retain the recruited workforce. Manufacturing organizations need to consider their future existence with the regeneration of workers in the next 10 years and the biggest human resources recruited are millennials. Producers will need to increase 3% of the current millennial workforce to meet the national average percentage in the current workplace, as well as an increase in the representation of millennial generation as more workers retire. If the producers do not maintain the millennial generation that has been recruited, they will face a more significant problem for manufacturing in the future. In addition to attracting and retaining a workforce, producers must manage gaps in the technical skills needed for the digitalization of a growing industry (NAM, 2014).

### *1.1 Skills Gap*

One example of how technology is revolutionizing the current manufacturing industry is 3D printing. Also called Additive Manufacturing (AM), 3D printing is a tool used in various manufacturing lines (Vazquez, Passaretti, & Valenzuela, 2016). 3D printers use digital codes and programs to produce or "print" parts or products from various materials. The technical skills needed for additive manufacturing system services are different from the skills needed to run traditional machines.

According to Vazquez et al. (2016), an organization should pay attention to training for the needs of improving the capabilities and skills of the workforce. Deloitte's researchers and consultants recently published a report to manufacturing organizations detailing gaps in the talents of their workers in realizing the full potential of additive manufacturing, so organizations must focus on developing AM workers who are capable and skilled at continuing, "real and significant challenges to the experienced workforce population that is more dominated by old people, plus a lack of interest among young workers and skills gap s surrounding the use of AM technology" (Vazquez et al., 2016, p. 1).

Deloitte's researchers cite research showing that producers really look forward to filling the shortage of manufacturing jobs in the coming decade due to the lack of qualified, skilled candidates on the grounds of finding the right skills to be employed, so the organizations realize that they must train the specific skills needed.

In addition to training new workers and re-training existing workers, another challenge for

manufacturing organizations is retaining existing workers. Training workers to perform highly skilled tasks is an investment for the organization; if turnover is high, costs rise higher because the organization needs to invest in more people, only to lose investment when workers leave the organization. Deloitte's research suggested that many prospective AM workers tend to be millennials, who change jobs more often and maybe less loyal to the organization. Around 44% said they hoped to leave their current job and get another job elsewhere (Vazquez et al., 2016, p. 8).

### *1.2 Millennial in Leadership*

This section focuses on leadership from a millennial perspective. The millennial generation in the manufacturing industry wants leadership and organizational culture that is in line with their needs.

Millennial social, ethical, and global needs and learning about leadership sustainability through additional exploration from millennial leaders is critical. Leadership responsibility for culture in the workplace, employee satisfaction, and how this is needed so that the millennial generation is interested and surviving in the manufacturing industry to how is the organization can help increase opportunities for the success of the manufacturing industry 4.0 by investing in the next generation of leadership.

One of Deloitte's survey questions was about business responsibilities, social, and global ethics (Deloitte, 2016). The results showed that nearly half of the millennial generations surveyed have negative perceptions about the value of business places on social, ethical, and global needs.

1. Focus on your own agenda,
2. Behaving ethically,
3. The leader is committed to helping improve the community, and
4. Do not have ambition other than making money.

The survey also found that almost half (49%) chose not to do work at the workplace because it was against personal values or ethics (Deloitte, 2016, p. 11). Thus, it is hoped that millennial leaders base their decisions on personal values and the achievement of individual targets or goals.

In the synthesis of research studies, Campione (2015) found that personality traits in the millennial generation are classified as a strong sense of individualism, increased self-esteem, and assertiveness.

Finally, the author of this study suggests two traits that support the ideal workplace for

millennials, which promote more justice for individuals. Increased self-esteem and assertiveness support the individual belief to succeed and contribute in the workplace, regardless of background (such as years of experience at the workplace) and to treat people as individuals, rather than group members. (Campione, 2015, p. 63)

A recent study conducted by organizational development scholars on leadership and work safety described leadership as "a process of social influence where one person can ask for help and support from others in completing a joint task" (Nielsen et al., 2016, p. 142).

Leaders, including managers, supervisors, or executives, are the people who determine the rules and what the culture will be. Millennials place great importance on social standards; thus, leadership needs to consider this when developing a basic outline of leadership and development.

### *1.3 Transformational Leadership*

The industrial revolution 4.0 has demanded leadership to rethink its role in the organization, to think more systematically and humanistically about how to lead millennial generations. The study of transformational leadership and the manufacturing industry shows that organizations understand the mutual benefits of inspiring, advocating, empowering, and communicating effectively throughout the organization are crucial for future success. Transformational ideas refer to the goal to equip workers with confidence and the ability to adapt and become more innovative in their approach to work.

Leaders must rethink how to make decisions for the future and bring millennial generation into the discussion because it will not only form a large part of the workforce but will also likely be in the executive leadership positions in the next 5 years (Deloitte, 2016). Millennial leaders will shape the manufacturing industry, develop leadership, and guide the next generation of workers. How organizations include these stakeholders in the assessment, design, and development of leadership programs is a key factor in determining what leadership development and organizational sustainability will look like in the future.

Recent and future industrial needs are to encourage tactical and philosophical discussions about how to properly prepare the current workforce (Brousell, 2015). Leaders are faced with addressing future needs by identifying the structure and vision needed to deal with the sophisticated

industrial revolution 4.0 (Brousell, 2015). At the same time, leaders in the manufacturing industry need to analyze the rankings of management, supervisors, and workforce to determine what skills they have and how to obtain the skills needed to carry out the future vision (Brousell, 2015).

The millennial generation is quickly emerging as the largest demographic of the existing workforce (Pew Research Center, 2015). Millennial generation emerges quickly when managers, supervisors, and future leaders are assigned to carry out the vision created by leaders. When these leaders analyze the status and needs of the future, understanding the millennial workforce, preferences, readiness, and leadership abilities are vital questions to be included when making processes to meet the needs of the manufacturing industry 4.0 (Campione, 2015).

Using existing leadership development practices may be useful and need to be analyzed (Borderless, 2016). Research shows executives that leadership programs may not be as effective as training some of the key attributes and behaviors that are deemed necessary for the manufacturing industry 4.0 to succeed (Brousell, 2015). It is unclear whether the millennial generation basically possesses these qualities, or whether additional training is needed. It is also unclear whether the existing training program is able to transfer the necessary skills, attributes, and behaviors.

### *1.4 Next Generation of Leadership*

Leadership development in this context has two parts. The first part is the development of new skills for current leaders. The second part deals with looking forward to developing leadership capacity in the millennial generation. David Brousell stated that the next generation of leadership knows which direction to take and has the ability to reach wherever it is. The current existential problem is about talent, intelligence, knowledge, and the courage to use information technology in changing the basics of manufacturing business. (Brousell, 2015, p. 4)

In discussing the ability to build leadership capacity, the Deloitte Millennial Survey found, "Millennial believe that business is not enough to bridge the gap in the creation of new generation business leaders" (Deloitte, 2016, p. 6).

The Deloitte report in its survey results found 71 percent of the millennial generation who would resign within the next two years was not happy with how leadership skills were developed. (Deloitte, 2016, p.7). Deloitte (2016) warned that

loyalty to an organization could be attributed to the neglect of millennial generation in terms of leadership. In other words, if the organization does not invest in developing leadership capacity, millennials can go or work elsewhere.

Further investigation by Claire (2015) showed that millennials with specific leadership traits are able to inspire and help organizations produce new ways to rethink challenges. The backward lesson for organizations is the idea that senior leaders must show to younger groups how to work (Claire, 2015).

This idea is supported by research on self-determination theory that was originally developed by Edward L. Deci and Richard M. Ryan (Deci & Ryan, 2008). The theory begins with a basic premise for internal or intrinsic motivation, namely autonomy, competence, and linkages. While external motivation is how external traits force certain behaviors, internal motivation describes how humans proactively force themselves to complete a task or behavior. Autonomy illustrates the ability to make their own decisions about how to complete a task. Competence illustrates validation that knows what is done or at least has the necessary skills to find out. Linkage refers to the ability to connect with others to share and collaborate. All three are described as fundamental needs for desirable traits (Deci & Ryan, 2008).

Campione (2015) reinforced the desire of each generation to place "high value on the intrinsic aspects of work. What might have changed (with the Millennial) is the ability to find meaning and interest in work". Research provides evidence that job satisfaction correlates consistently and significantly with retention. According to the self-determination theory, millennials do not have different motivational values. While millennial has different narratives and perspectives in defining collective experience events; self-determination theory itself does not state that it has a different set of humanistic motivations (Deci & Ryan, 2008).

Aaron Hurst explained that the next generation of the workforce is motivated to find goals at work. Economic goals describe a new context and set of ways in which people and organizations focus on value creation, and define organizing principles for innovation and growth" (Hurst, 2014, p. 22). Additionally, Hurst described personal and social goals as types of goals, which are motivations for engaging and growing. Shifts to economic goals have placed meaning and purpose at the heart of contemporary labor, goals rather than career longevity, providing stability

needed rather than adjusting to work, and preparing to develop careers; workers must now increasingly focus on building themselves in the workplace. This has inspired the millennial generation, which is increasingly building an identity around the goal of understanding the rapidly developing world and the fluctuating role in it (Hurst, 2014, p. 35).

## 2 DISCUSSION

### *2.1 Attract and Produce Next Generation Leaders*

Leadership plays a significant role in employee involvement and satisfaction. An interesting fact is that it is not as challenging to convince millennials to continue working in organizations. Other organizations urge workers with higher salaries and high-tech celebrities. In addition, the manufacturing industry still uses a structure that is still old, not open to trying innovation or creative experiments.

Leaders who focus on the manufacturing industry 4.0 show concern that current leaders lack the skills needed for the future unless millennial leaders are learning something different from what is seen and imitated by leaders. There is a need to decently learn what skills are needed for change to occur, which makes it increasingly unlikely that current millennial leaders are ready for the future based only on the skills that have been modeled. Manufacturing organizations that are unaware of the need to evaluate the development of adequate leadership skills and the value that millennial can bring to be integrated and enhanced may potentially lose leaders who will provide talent retention. In addition, when technology threatens to change existing processes and norms, the millennial generation is prepared with an intuitive understanding and application of technology that can be learned and found to be beneficial from what has been previously learned.

### *2.2 Interdependence among Manufacturing Industry 4.0, Leadership, and Millennial Generation*

The interdependence among manufacturing industry 4.0, leadership, and millennial generation urges us to consider the future based on changes that can be recently made. While technological improvements are referred to as intergenerational differences, thus in organizational development,

there is a lack of ability to communicate and learn with each other as partners.

One way to improve this situation is to examine interventions in which different generations are united to discuss how to feel valued with one another and how an assessment of the experience of an older generation and the comfort of a younger generation with technology can be used in solving complex business problems and the future needs of the organization. The first step is to build trust through exploration of how each generation views the pressures of change and how to build, or erode, trust in the past by placing the value of work, leadership, ideas, and actions carried out in a way that can be agreed by all parties to be transformational for the organization. For example, if the manufacturing industry 4.0 needs leaders who are advancing and changing, how can the experience of older generations through periods of change alone help younger leaders take lessons and apply them to the current situation? Exploration and application of learned experiences combined with new ways of thinking can have a profound influence on the manufacturing industry in terms of process and product development.

**The Development of Leadership Skills Learning**  
The development of leadership skills can be applied to the current industrial revolution 4.0 model. The youngest generation who needs guidance and direction at a certain point is required to explore and learn. There is always a state of incompetence that is not realized; especially when someone is so skilled and does not even notice the situation has changed. At each evolution stage, the industry changes with the needs of the workforce and the skills of leaders to manage it.

Manufacturing organizations that have a desire to be part of the future already recognize this problem, but may not recognize how the impact of cultural change in leadership will occur. The youngest generation of leaders who have desires, curiosity, technical talents, flexibility, and attitudes that are ready to jump in and play with lots of ideas and want older generations to provide valuable insights and knowledge, but cannot determine how it is done, want to be appreciated for the skills and perspectives that they bring. Therefore, the millennial generation must respect that a part of their skills and perspectives are formed around the narrative itself. In addition, they must reduce the frustration at the hierarchical structure shown by people who want to partner because of experience, have structural discipline, hard work, and respect for having more experience that forms the

approach to building a successful manufacturing organization.

### 3 CONCLUSION

Changes in the manufacturing industry, leadership, and millennial generation as individual entities have overlapping impacts. Manufacturing organizations are in a state of transformative change in unclear territory. Attracting the role of the next generation is entirely different from the previous generation, coupled with the momental changes in the industrial revolution 4.0. Some specific preferences can be used to show attitudes about the work of the millennial generation as follows: The millennial generation has a network of friends in the workplace; this has an essential role in terms of job satisfaction. The millennial generation considers more challenging tasks, a series of new experiences, and evaluation and recognition of specific performance. The millennial generation places the highest importance on opportunities for job improvement. The millennial generation wants to achieve feedback, respond positively to leadership or transformational training. Working in teams is the primary motivator; seeking accessibility to coworkers, even among leaders.

The industrial revolution 4.0 took place, and the millennial generation will become a workforce that dominates the future. Now, the millennial generation and industrial revolution are challenging the old belief system. Along with that, leadership towards future changes with new values and social norms. Leaders must learn how to adapt to new norms that focus on the needs of individual workers because globalization and technology have broken down barriers of distance and intellectual work. Organizations must rethink effective leadership development programs by considering cultural aspects to meet the needs of today's workers in order to become future leaders.

### REFERENCES

- Brousell, D. R. 2015. A leadership playbook for manufacturing 4.0. *Manufaktur Leadership Journal*, 6 (5), 16-22.
- Campione, W. A. 2015. Corporate offerings: Why are not millennials staying? *Journal of Applied Business and Economics*, 17, 60-75.
- Deloitte. (2014). The millennial survey 2014: Big demands, high expectations. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/global>

- [/Documents/About-Deloitte/gx-dttl-2014-millennial-survey-report.pdf](#)
- Deloitte. 2016. The 2016 Deloitte millennial survey: Winning over the next generation of leaders. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/gx-millennial-survey-2016-exec-summary.pdf>
- Deci, E. L., & Ryan, R. M. 2008. Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology/Psychologie Canadienne*, 49(3), 182-185.
- Hurst, A. 2014. The purpose economy. Retrieved from <https://www.amazon.com/>
- National Association of Manufacturers. 2014. The skills gap in U.S. manufaktur 2015 and beyond. retrieved from <http://www.themanufakturinstitute.org/~media/827DBC76533942679A15EF7067A704CD.ashx>
- Nielsen, M. B., Skogstad, A., Matthiesen, S. B., & Einarsen, S. 2016. The importance of a multidimensional and temporal design in research on leadership and workplace safety. *The Leadership Quarterly*, 27, 142-155. <https://doi.org/10.1016/j.leaqua.2015.08.003>
- Pew Research Center. 2018. Comparing millennials to other generations. Retrieved from <https://www.pewresearch.org/interactives/how-generations-compare/>
- Vazquez, E., Passaretti, M., & Valenzuela, P. 2016. 3D opportunity for the talent gap. Deloitte Insights. Retrieved from [https://www2.deloitte.com/content/dam/insights/us/article/s/3d-printing-talent-gap-workforce-development/ER\\_3062-3D-opportunity-workforce\\_MASTER.pdf](https://www2.deloitte.com/content/dam/insights/us/article/s/3d-printing-talent-gap-workforce-development/ER_3062-3D-opportunity-workforce_MASTER.pdf)