

DEVELOPING DIGITAL LEADERSHIP PRACTICES IN MILITARY: A WAY FORWARD

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Abstract

Military leadership today deals with a plethora of information related to its on-field and off-the-field operations that are complex in nature and needs critical thinking which can affect the decision-making process. Information overload is a phenomenon that creates uncertainty and ambiguity in decision-making. Losing direction is very likely in such situations as it could be an issue for the leadership to keep track of what needs to be contained and what needs to be discarded from the chunks of information received continuously. Building adaptive and agile leadership is imperative to technology adaption in the military as digital decision-making and a tech-savvy culture will be key attributes of the future. Adapting digital technologies will help fight and win wars in the digital era and military leadership must learn the digital leadership skills to win the fights driven by technology. With the future of warfare going digital, knowledge-based decision-making will be a valuable asset as these capabilities will become a necessity in times to come. Information control will play a pivotal role in digital leadership and digital leadership combined with the foresight and experience of the commanders can help tackle fifth-generation warfare.

Keywords: Digitalisation, Digital Leadership, Hybrid Warfare, Military Leadership, Pakistan

Introduction

Security threats have changed considerably for Pakistan in the last two decades. Today, the dangers lurking with traditional security challenges are still on the table because of the unstable regional dynamics but the non-traditional threats have increased in their intensity. The characteristics of war have changed from traditional air, ground, and water to include space and information control. These technological changes especially autonomous systems and artificial intelligence also known as fifth-generation warfare have changed the dynamics of battlefields. Currently, less is fought on the ground as compared to information wars through digital media, cyberspace, and satellite technologies. The changes in military approach to warfare around the world demands the military leadership to be tech-savvy. Therefore, the current and future military leaders of the country must make their acquaintance with digital technologies.

The adaption of Information and Communication Technology (ICT) in the military is a key development around the world. The use of information warfare (IW) and

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digitalisation has become a powerful weapon for states and is used extensively by state and non-state actors as a propaganda tool to disseminate information. In the past, wars were fought in a traditional manner where forces were deployed on land, air, and sea. Then came the use of outer space by different countries to position their satellites for military purposes, research and development and information gathering. With digital transformation and the increased use of the internet, the current times are dominated by the threats of enemy infiltration and superiority expanded through the control and dissemination of information as compared to traditional warfare practices. Military leadership, which in the past was making strategies to overcome physical forces, are now facing challenges with virtual armies. The information flow related to enemy movement, terrorist threats, and other anti-state activities through online sources has increased considerably compared to the past. Military leaders now have to make sure that they are updated with these emerging digital threats regularly and make decisions on how to contain them. One of the tactics used in military warfare is controlling the capabilities of the enemy and destroying it or using it to our advantage. In the age of digitalisation, these targets include primarily controlling the information network of the enemy and safeguarding our network from them. The fifth-generation warfare is primarily about controlling and disseminating information to the advantage of state and digital military leadership is vital to dominate the hybrid warfare strategies.

There is a gap in the use of technology in the military along with traditional strategies that need to be addressed to tackle the emerging challenges of hybrid warfare in Pakistan. The need to bridge the human-technology gap is imperative as the role of leadership in utilizing these technological advances in security strategies can be advantageous to strategy-making in the military. Due to the geographical location of Pakistan and its borders with its neighbours especially India, which is advanced in information technology, the threats of digital warfare are imminent. Digital technologies whether in the shape of cyber warfare, autonomous and semi-autonomous weaponry, information control and dissemination, outer space technologies, or designing military tactics among others have an impact on military operations. Therefore, the military leadership needs to make sure that they are well-equipped with digital leadership practices along with traditional tactics to master the art of hybrid warfare.

Digital Leadership in Military

Defence forces around the world are spending a considerable amount of funds, particularly on the research and development of defence technologies. The use of digital technologies in defence forces started in the nineteenth century with automation in weaponry. The First and Second World Wars witnessed an increasing role of automated

weapons in use which were later developed further in the form of robots and artificial intelligence (AI) controlled equipment.¹ These wars also saw countries using technology in their information gathering networks. The use of technology changed in the twenty-first century with the adaption of digitalisation in the leadership decision-making process along with weaponry. A report by McKinsey & Co. stated US spending of \$34 billion on research and development projects in the military in 2022 which is expected to increase to \$ 40 billion in 2023.² United Kingdom has a department “Defence Digital” for specialised digital military needs with annual spending of £4.4 billion in 2022.³ The European Defence Fund (EDF) (2021-27) is another initiative taken by the member EU countries to enhance the defence mechanism of the region under the Multiannual Financial Framework (MFF).⁴ The estimated market value of AI by 2025 will be around \$100 billion.⁵ These technologies are expected to help the military leadership in their command and control roles that are vital to their strategic planning.

With military institutions around the world spending considerable budgets in developing the digital competencies of their defence forces, the aim is to ensure that the leadership in these institutions have enough information on their hand to take decisive action. The military spending on digital technologies in the US for instance is justified by the fact that it will give a powerful edge to the country in terms of military leadership and foreign policy roles in the future to serve the interests of the nation.⁶ It can be witnessed that in today’s age dominated by digital information, countries that have a strong digital presence in their defence organisations have an edge in military operations, leadership roles, and foreign policy designs.

Because of the lethal and highly complex nature of warfare, it is required of military leadership roles to act promptly to accomplish their task in conditions that can change rapidly.⁷ One of the challenges where the military leadership needs to take immediate action is developing the role of digital leadership practices in their workplaces. The leadership must inculcate digital skills in their roles and develop their commanding capabilities accordingly to answer the looming threats of hybrid warfare.⁸ Leadership in the military is about effective command and control of its operations. The essential qualities of an effective leader include good command and control ability and effective decision-making. Future military leadership roles to address these commanding abilities will include technology adaption and information control that will shape hybrid warfare.

According to “Innovation Diffusion Theory” (IDT), technology adaption depends upon three features that are complexity, compatibility, and relative advantage.⁹ Technology adaption in terms of relative advantage can help upgrade traditional systems. It can also be checked if the technology adapted will help better decision-making by the

leadership as compared to the previous cases and is compatible with the needs of the state and how complex adopting the technology will be for the leadership and the followers. Also, technology adaptation in terms of relative advantage over the enemy is the main cause of including it in the defence system. The users of technology according to the theory are innovators of technology, early adapters, early majority, late majority and those who are left behind in technology adaption.

The theory is applicable in terms of digital leadership development in Pakistan where the technology adaption rate in the military in terms of complexity, compatibility and relative advantage could be helpful for the leadership in developing digital leadership. Pakistan is facing challenges in terms of complete digital adaption due to a number of reasons including the cost of technology adaption, compatibility of technology to the regional requirements and reliability on third-party suppliers. Although the leadership has taken concrete steps to introduce technology in many functions of the defence, there are still many areas where digitalisation of the traditional system can help in informed decision-making.

What Digital Threats are we Facing?

Military leadership today deals with a plethora of information related to its on-field and off-the-field operations that are complex in nature and need critical thinking that can affect the decision-making process. The challenges faced by military leadership pertaining to irregular patterns in warfare and counterinsurgency require considering human and technological factors.¹⁰ As South Asia particularly Pakistan is facing security threats more often as compared to other states in the region, the role of leadership in the military is of greater importance in dealing with these challenges. That combined with technology is essential for tackling hybrid warfare in the region as technology has played a great role in its impact on warfare in South Asia.

Since the start of the Cold War, both India and Pakistan have been trying to acquire technology, particularly in the defence sector. The first breakthrough in technology came with the acquisition of nuclear technology for both countries along with China which already had the technological capabilities in this domain. With the end of the Soviet war in Afghanistan and later the US-led allied forces operation against the Taliban, the need for information accuracy for military leadership increased in the region. The geographical location in Afghanistan made it difficult for the Allied forces to conduct on-ground operations and there was much reliance being made on the information gathered through different sources. This information helped the leadership to take action on the ground and conduct successful operations for the time being and control the

insurgency. The same was observed in different terrorist operations in Pakistan by the defence forces where the use of technology enabled the leadership to take successful decisions to curb anti-state militants in the country. Over time, there is, however, a rise in non-traditional threats like cyber warfare that have increased the threat level in the country once again.

As disruptive technologies have driven change in terms of military perspective, they have an impact on how decision-making needs to be done in the future. One of the digital challenges from the security point of view faced by the state where digital leadership is imperative for containing these issues is the flow and control of information. Information overload is a phenomenon that creates uncertainty and ambiguity in decision-making. Losing direction is very likely in such situations as it could be an issue for the leadership to keep track of what needs to be contained and what needs to be discarded from the chunks of information received continuously by the leadership. Emerging trends in warfare point out that putting reliance only on traditional warfare tactics might not be effective in recent times. As fifth-generation warfare is dominated by information control, there are state and non-state actors involved in the control of the flow of information that is more important than the physical force." Information controlled by these actors could be useful or damaging to a country depending upon the advancement in digitalisation and how digitally literate is the leadership. Having a lack of control or weak control of the flow of information is challenging in terms of information warfare, especially with digitally advanced neighbours like India.

Social media and digital media platforms are insecure because of their accessibility and vulnerability to anti-state actors and there is no escape from the fact that they can be used against the state. Social media posts are also subject to thorough scrutiny from the media agencies. There are also threats that these platforms can be used to communicate security secrets by the enemy that has infiltrated in the ranks. Digital leadership roles, if not properly trained would not be able to identify these digital media threats which would be challenging in implementing the privacy rules and putting a curb on the publication standards.

Digital and traditional media sources have enhanced their visibility among the masses which has impacted the way in which people behave on digital platforms. Anti-state agents and counter-narratives by the adversaries are on the rise through these sources and leadership cannot remain isolated from its impact. The fifth-generation warfare is dominated by traditional and non-traditional attacks on the state through these agents. Because of these developments, the nature of warfare remained the same, but the characteristics of warfare changed giving rise to information warfare (IW) challenges for

Pakistan. The role of the EU Disinfo Lab which operated from Europe for instance was involved in spreading rumours about Pakistan throughout the world sponsored by India is one common occasion where cyber warfare was launched on Pakistan by its neighbour.¹² The spread of misinformation against Pakistan through digital platforms by its enemies is also challenging for the leadership.

The use of innovative technologies and fifth-generation warfare is also a challenge faced by Pakistan. Space and disruptive technologies adaption are difficult as the country is heavily reliant on its partners in this field and uses their platforms.¹³ These technology dependencies have increased the vulnerability of developing countries like Pakistan. Cyberspace technologies in military leadership are crucial for the current and future warfare of the country. The reliance on disruptive technologies has increased in the military around the world and all the big powers are rushing after the adaptability of these innovations in their military as their extensive use is tantamount to leadership decision-making. It is easy for economically developed countries to adapt to these technologies but for countries like Pakistan, there are financial constraints and lack of in-house facilities that are making it difficult to adapt to digital technologies.

How can Digital Leadership Help?

The purpose of adapting digitalisation in any organisation including the military is to create a process that can help in better decision-making for the leadership by providing several possible outcomes to a situation. Digitalisation might not be able to change the realities of warfare but can help in predicting the next moves of the enemy. The role of a leader is to take calculated action on the ground and a digital leader can have better decision-making once technology and access to information are used as a tool. It is the duty of a military leader to have a command of various areas and make the best decision out of different scenarios put in front of them and understand the impact of that decision and information is the most important variable in the decision-making.¹⁴ With the future of warfare going digital, knowledge-based decision-making will be a valuable asset as these capabilities will become a necessity in times to come. Information control will play a pivotal role in digital leadership and digital leadership combined with the foresight and experience of the commanders can help tackle fifth-generation warfare.

One of the uses of digital technologies is in the development of advanced weaponry. The deployment of autonomous and semi-autonomous equipment in the field along with humans has already started in South Asia. The technology-driven weaponry has helped the leadership achieve more in less time and with fewer human casualties on the battlefield. With the increased use of technology in battlefield equipment which is

vital for enhancing the operational capabilities of the forces, the staff and the leadership must be trained to efficiently use these functions.

The role of adaptive leadership in accepting technology is central to active decision-making during critical times. Especially in the future where wars are more psychological activities compared to on-ground actions. The future of warfare will be knowledge-based which will be constructed on information and focus on “Soft kill” instead of “Hard kill” strategies and will require more information-based operations rather than ground action for which innovation is required in the military structure.¹⁵ In these instances, digital leadership training programs can help military leaders face challenges like digital and media anti-state and anti-defence forces campaigns. Digital skills adaption will enable the leadership to set soft targets and gain technological advantages.

The role of digital leadership is also central to social media and digital media use in the defence forces. This could be used as an advantage for information sharing with the public and within the ranks. The use of social media could also be a problem for the defence forces as it could lead to critical information leaks on purpose or unwillingly. Especially the increased use of digital platforms by the youth is on the increase and it is difficult to completely put a curb on its use in the defence forces. There needs to be an assessment criterion of “digital thinking” in the youth and introducing educational awareness in the ranks about the risks and creativities of digital footprint in the officers and soldiers.¹⁶ Digital leadership also needs to ensure that policies should be adapted to the use of social media. Also, digital media use to gain tactical advantage could be achieved like in the case of Syria and Libya where social media platforms like Twitter were used as information sharing on enemy targets by the allied forces with the help of the local population.

Cyberspace programmes have also been adapted by Pakistan as a part of its outer-space technology development which are mostly used for peaceful purposes. The use of cyberspace technology could be developed which is compatible with defence use. Pakistan has performed well in terms of cyberspace threats but the medium-sized and lower-range threats still need to be catered to as the strategic defence culture against the information and communication network increases its vulnerability.¹⁷ Adapting an advanced cyberspace programme is very vital for the future success of the country along with dealing with security challenges that the ICT industry faces from the enemy which can hamper the security of the country. These technologies would be vital in the future digital leadership decision-making process of security organisations in Pakistan.

Defence establishment of Pakistan has taken steps towards the digitalisation of its armed forces. The initiative of establishing the Inter Services Public Relations (ISPR) is a step towards digital leadership. The institution is tasked primarily with establishing a link between the defence forces and the general public where the leadership is officially interacting with the public. ISPR is also tasked with creating digital awareness in the country on the anti-state activities and enemy soft targeting of the youth in Pakistan that are designed as a smear campaign by enemy states against the country. The digital awareness in leadership has enabled the technology users in the country to identify such agents and take decisive action against them. Also, by launching a digital campaign on media platforms, the digital military campaign has been promoting national interest and public awareness on these issues. The military leadership in Pakistan also used different strategies to tackle the digital security threats in the country and increase the people-to-military relationship in the war against terrorism and encourage participation by the public.¹⁸ The inclusion of digital programs in military institutions is also important especially digital inclusion courses at National Defence University, war colleges and military academies. These programmes will help the current and future leadership understand and address the digital challenges faced by the country.

Conclusion

Modern-day military leadership must acquire digital leadership skills and have a sound understanding of how digital tools and technologies help in fifth-generation warfare. As military operations are changing their nature, digital leadership skills can help the command operations in future operations. Adapting digital technologies in warfare has become essential to tackle current and future challenges as they play an essential role in decision-making towards traditional as well as non-traditional threats and effective adaption of digital leadership can place the military at a better position in future conflicts. Leadership in any organisation is the least expensive resource but the most expensive asset as they play a crucial role in organisational success. Building adaptive and agile leadership is imperative to technology adaption in the military as digital decision-making and a tech-savvy culture will be a key attribute of future leadership. Adapting digital technologies will help fight and win wars in the digital era and military leadership must learn digital leadership skills to win the fights driven by technology. Digital transformation in military will help the leadership respond immediately to the internal and external threats with agility and the application of human centric digital approach in defence organisations will help engage and empower the military.

Adapting digital technology in the military will help the leadership better informed about the situation and make strategies based on the information. This will help

in damage control and effective decision-making in military operations during peace as well as war times. With the dangers of non-traditional threats like cyber warfare, the spread of misinformation through digital media, and enhancing the visibility of defence forces, digital leadership in the military is vital for future security needs.

Endnotes

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