

# A Review on the Role of Leadership in Online Learning Environment among Students

Fatimah Hishamuddin and Nurbiha A. Shukor<sup>a</sup>

*School of Education Faculty of Social Sciences and Humanities, Universiti Teknologi Malaysia, Johor, Malaysia*

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**Abstract:** Fostering students' leadership skills is a challenge and a commitment, both personally and professionally. People often overlook leadership skills in education because people perceived that leadership skills should be acquired by someone who has a specific role as a leader. Other than nurturing leadership traditionally or face to face, it can be nurtured online. In online learning, leadership can emerge among members without appointed as official leaders. This study aims to explore the role of leadership in an online learning environment. The literature searched was carried out using online databases such as Science Direct, Scopus, Emerald, IEEE Xplore, Taylor and Francis and Wiley Online Library. Findings from the literature review show leadership plays a role in the online learning environment by improving behavioural engagement between members, enhancing knowledge sharing, improving the individual learning experience and enhancing positive emotions and motivations. Future research should focus on identifying the effect of leadership on multi-dimensional aspects of online learning such as learning engagement (behavioural, cognitive and emotions) as well as students' learning performance.

## 1 INTRODUCTION

Online learning is implemented in various educational fields such as professional development (Simsek, 2015), teacher education (Saparova et al., 2014) and students' activities in learning (Barak et al., 2016). Several researchers discussed the advantages of online learning, such as the ability to interact asynchronously (Aljerais et al., 2015; Broadbent, 2017) where students can share their experiences and ideas in the class leads them to a better understanding. They are able to share their knowledge anytime and anywhere without physically meeting each other.

More importantly, online learning allows interaction in a group to occur more efficiently. This empowers discussion to be carried out online to facilitate students to inquire and offer an explanation and help, exchange, analyze or evaluate their understanding, and share their ideas on learning contents from various perspectives for formulating knowledge in their learning processes (Dunlap, 2005; King et al., 1998).

As web technologies have been widely used to support remote communications and collaborations,

research on team leadership has been extended to these virtual spaces, such as virtual teams. Leadership roles in virtual teams are demonstrated through engaging in online activities and interaction through computer mediated communication (Huang et al., 2010). In online learning, shared leadership occur when the leadership is distributed among team members and is characterized by sharing leadership roles (Carte et al., 2006). Leadership in online learning becomes essential as a leader can take charge by identifying and supporting learning, structuring the social environment and manage the external demands (Leithwood et al., 2004). Leadership skills require students to be proficient in handling and managing their group and online learning environment able to highlight students' leadership roles (Cheng et al., 2019).

However, nurturing leadership is hardly a concern among teachers and educators in online learning despite being an essential skill for successful learning collaboration (Huang et al., 2010). This is because many regard leadership skills as a trait that one develops over time and should be naturally nurtured rather than shaped by design during learning (Yukl,

<sup>a</sup> <https://orcid.org/0000-0002-9587-8929>

2013). Moreover, individuals slowly develop their leadership skills during their experience in the workplace (Beachum & Dentith, 2004).

Due to these reasons, this study seeks to better understand the importance of leadership in learning particularly online where physical absence could further enhance the challenge of learning online. The following is the research question is investigated in this study:

Research Question: How leadership plays a role among students learning online?

## 2 METHODOLOGY

To fulfil the research objectives, we limited the search studies related to leadership in online learning. The inclusion criteria in this study include virtual learning, leadership among learners and focused on the role of leadership in online learning that influences the learners. On the other hand, this study excluded any articles not related to the learners' leadership. The articles' screening for inclusion is based on the review of abstracts and followed by a full-text review.

Several databases search have been performed through Scopus, ScienceDirect, Emerald, IEEE Xplore, Taylor and Francis as well as Wiley Online Library to search articles published from 2010-2020 and the publication language is English.. The following keywords were used to search the publications: leadership & online learning, leadership & virtual learning, emergence leader, & online learning and online leaders. Table 1 shows the database source, initial and final numbers of articles selected from the respective database.

Table 1: Distribution of papers by Online Database.

Database	Candidates	Selection
Scopus	22	5
Science Direct	12	2
IEEE Xplore	10	2
Taylor and Francis	10	3
Emerald	9	0
Wiley	5	1
<b>Total</b>	<b>68</b>	<b>13</b>

## 3 FINDINGS AND DISCUSSION

The search has produced 68 articles but only 13 articles were found relevant to answer the research

questions for this study. Table 2 shows the role of leadership in online learning online.

Table 2: Studies of leadership in online learning.

Author (Year)	Research Purpose	Sample	Role of leadership in online learning
Flammia <i>et al.</i> (2010)	To examine the leadership roles in the virtual team	Higher education student	Establish positive team process
Gressick and Derry (2010)	To determine the effect of the distributed leadership to the group performance	Maths and science teacher	Influence motivation, knowledge, affect or practices of group members
Lee <i>et al.</i> (2015)	To examine the shared leadership on knowledge sharing and team creativity	Higher education student	Improve knowledge sharing and team creativity
Gallego-Arrufat <i>et al.</i> (2015)	To examine the leadership role in the virtual settings	Secondary school student	Influences the group's motivation and enhanced the construction of knowledge.
Lu and Xie (2018)	To examine leadership styles that can influence collaboration experience and individual performance	Higher education student	Establish teamwork to complete the task
Cheng <i>et al.</i> (2019)	To examine group leadership in online collaborative learning	Higher education student	Promote the construction of knowledge,
Selcuk <i>et al.</i> (2019)	To examine the effect of peer leadership in web-based collaborative	High school student	Improve self-planning in learning, self-confidence and motivation
Xie <i>et al.</i> (2019)	To examine the relationship between perceived leadership, group cohesion, online engagement, self-regulation and learning outcomes	Higher-education student	Influence student's self-regulation and behavioural engagement
Chen <i>et al.</i> (2020)	To investigate the impact of an assigned leadership role on learner's participation and learning experience in an online collaborative learning	Higher education student	Increased learning participation

Table 2: Studies of leadership in online learning. (cont.)

Author (Year)	Research Purpose	Sample	Role of leadership in online learning
Durnali (2020)	To examine the self-leadership and self-directed learning in an online learning environment	Higher-education student	Discipline in learning and resulted in better learning outcomes
Kim, Lee, <i>et al.</i> (2020)	To examine students' leadership style in an online learning environment	Graduate-level online course student	Increased positive feelings between peers and motivation
Kim, Wang, <i>et al.</i> (2020)	To identify the relationship between learning leaders and engagement in an online learning environment	Graduate-level online course student	Invest in the cognitive effort, higher engagement and positive emotions
Yilmaz <i>et al.</i> (2020)	To examine the effect of vertical and shared leadership on self-regulated learning skills, motivation and group collaboration process	Elementary school student	Fostering a sense of belonging and enhanced behavioural engagement among members

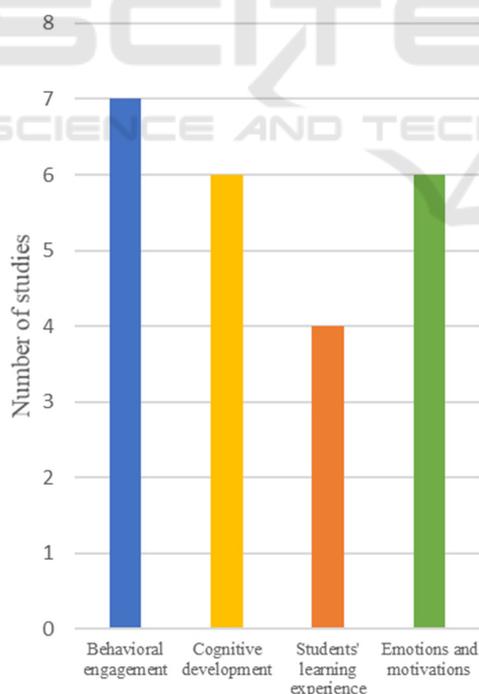


Figure 1: Number of studies related to the role of leadership in online learning.

From the 13 articles reviewed, we were able to identify the role of leadership in an online learning

environment. Figure 1 shows a graph related to the number of studies that show the role of leadership that can influence behavioural engagement, cognitive development, students learning experience and emotions and motivations in online learning.

From the graph, we can conclude that most studies show that leadership in online learning can affect behavioural engagement, cognitive development and emotions and motivations. Behavioural engagement and cognitive development are factors in achieving success in the online learning environment (Tu & Corry, 2003) by actively participate during learning and sharing their knowledge. Meanwhile, positive emotions and motivation encourage learners to engage in their learning (Du *et al.*, 2016). Leadership increase learners' confidence and keep students motivated as well as expressing their emotions rationally. Students' learning experience is the least factor because in online learning, group work is essential. Thus, other than individuals goal, during online learning, learners tend to achieve group goals.

Behavioural engagement is often viewed as the participation of learners in learning. Research conducted by Flammia *et al.* (2010) shows leadership can improve behavioural engagement by establishing positive team processes. The positive team processes are communication among team members, members keep track of each other and encourage members to participate. Such roles show learners actively participate during learning. Through active participation, learners able to share leadership roles in a group that can help them distribute responsibility and workload equally (Yilmaz *et al.*, 2020). The distribution of the workload in a group is important to ensure they achieved the goals of the group. Thus, leadership in online helps team members improve their engagement during learning as well as success in completing group tasks.

Furthermore, leadership can also benefit students' cognitive development. This is based on the study conducted by Gressick and Derry (2010), Lee *et al.*(2015), Gallego-Arrufat *et al.* (2015), Cheng *et al.* (2019) and Kim, Wang *et al.* (2020) which stated that leadership was able to enhance students construction of knowledge and sharing of knowledge between members. The construction of knowledge occurs when team members brainstorming their various ideas, accept the same opinions, discuss the issues and conclude their ideas. Leadership can play a critical role in promoting the process of knowledge construction and sharing (Singh, 2020). Furthermore, the process of knowledge building and sharing in a group can contribute to better group learning performance.

Other than benefiting students working in a group, leadership also helps individual students. According to Selcuk *et al.* (2019), Xie *et al.* (2019) and Durnali (2020), possessing leadership roles in online learning improves individual learning experience where it establishes students to plan, manage and reflect on their own learning. As a result, they improved their self-regulation, self-confidence and self-directed learning. Besides, students who are able to emerge their leadership during online learning can develop skills such as problem solving, awareness, research and negotiation (Bahçelerli *et al.*, 2017). Therefore, such skills make them able to manage their own learning very well and improve their learning in the future.

Other benefits of leadership in online learning as stated by Gressick & Derry (2010), Gallego-Arrufat *et al.* (2015), Selcuk *et al.* (2019), Kim, Lee, *et al.* (2020) and Kim, Wang, *et al.* (2020) is enhanced positive emotions and motivations. Leadership role help learners to identify other members problem in learning and ensure they keep motivated. Furthermore, leadership helps learners to express their emotions during learning. Thus, by expressing emotions, they able to keep motivated during learning and foster the feeling of a sense of belonging in a group (Hernández-Sellés *et al.*, 2019). When learners felt a sense of belonging in a group, they will keep their engagement and responsibility in a group to ensure they achieved their group goals.

## 4 CONCLUSION

In conclusion, this review helps the researcher identify the role of leadership in online learning. Besides nurturing leadership face to face, we can also foster leadership online because leadership in online learning can be emerged and shared among group members. Possessing leadership roles in learning benefits not only the group but also individuals. However, leadership in online is often overlooked because learners are at different places and communicate only through computer-mediated communications.

According to Curtis & Lawson (2001), ‘natural leaders’ emerged in a group when they contribute more in virtual communications. Such contributions related to managing group work, initiating activities and providing assistance and feedback. Nevertheless, studies have shown that leadership improves behavioural engagement, cognitive development, individual learning experience as well as positive emotions and motivation in online learning. A study

conducted by Kim, Wang, *et al.* (2020) supports that learners who exemplify leadership appear to show more cognitive efforts, engage in a continuous online discussion, show their positive and negative emotions more often, and score higher at the end of semesters. Therefore, with the benefits of leadership in online learning, we can nurture leadership online rather than face-to-face or traditional.

## 5 FUTURE SUGGESTIONS

Leadership has been proven to play various important roles in online learning but studies on nurturing leadership skills during learning online remain scarce where the emphasis is placed on improving students’ learning performance. Further studies should be carried out to identify the effect of leadership on multi-dimensional aspects of online learning such as learning engagement (behavioural, cognitive, emotional) as well as learning performance.

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