

# An Empirical Analysis of the Relationship between Self-efficacy, Motivation, and Team Performance of High-level Basketball Players

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## Abstract

Motivation is an essential part of team performance as it urges teams to make a collaborative effort and achieve a common objective or accomplish a specific task effectively and most efficiently. The current study aims to investigate self-efficacy for self-regulated learning and self-efficacy for motivation and team performance especially in case of basketball game. The study examines the mediating role of motivation among the nexus of self-efficacy for self-regulated learning, self-efficacy for achievement and team performance. The data was gathered through questionnaires from different basketball team players, while smart-PLS was executed for data analysis. The results revealed that self-efficacy for self-regulated learning and self-efficacy for achievement had a positive association with motivation and team performance. The findings also exposed that motivation positively mediated among the nexus of self-efficacy for self-regulated learning, self-efficacy for achievement and team performance. These findings are useful for the head of team management along with the sports policy makers who should benefit from its findings to enhance the self-efficacy, motivation and the team performance of basketball players.

**Keywords:** Motivation, Self-efficacy for self-regulated learning, Self-efficacy for achievement, Team performance

Teamwork is a collaborative effort of a group of persons to achieve a common objective or to accomplish a specific task most effectively and most efficiently. This concept is most often found in teams wherein a group of persons is interdependent to perform some work together and achieve a common goal (Sonoda, Onozuka, & Hagihara, 2018; Konstantinis et al., 2018; Srakar, 2018; Munoz, 2019; Sarkin & Gulleroglu, 2019). The teams may be small or big as their size depends on the nature of goals and context. The size of sports teams is however generally fixed, as it is based on set rules; however, it varies in other domains such as education, business or government. Whatever the size of a team, the basic purpose of any team is to achieve a set of common goals with great cooperation among team members. This cooperation is possible when team members have great motivation to work. Sports teams like basketball teams perform at the national and international levels across the globe mainly due to high performance accomplished through team motivation and self-efficacy.

The performance of teams is often checked through comparison with other contemporary teams having similar tasks and through comparison with ancient teams (O'Neill & Salas, 2018). The high-performance of a team is a concept within organizations and sports spectrum, which refers to teams or groups that highly focus on their set goals and common objectives in order to achieve better sports or business results. In addition, the high-performance teams also outperform all the other relevant teams having similar nature of objectives and goals. The high-performance teams also outperform the general expectations that led to their composition and work (Cooper et al., 2016; Gurel & Cetin, 2019). Such high performance teams also have members with specific roles, complementary talents, and skills, and have the sense of alignment and accomplishment of

common goals. These members demonstrate superior cooperation and innovation, give the best results, and avoid opinions which may result in damages.

Moreover, the tight-knit teams which have members intentionally and inwardly focused on their objectives can solve their problems with better performance. Likewise, teams where members have intentions and abilities to interchange their functions and responsibilities at the time of need outperform their rival teams (Gilfoyle et al., 2017; Kardas et al., 2019; Bomani et al., 2019; Sezgin & Cesur, 2019; Basilgan & Akman, 2019; Vyas-Doorgapersad, 2019; Ortega-Toro et al., 2019). Besides, in high-performance teams, the leader also plays a crucial role as better leadership makes member strong. They produce effective complementary ideas and show strong cooperation in the interest of the team as a whole. In recent decades, in the context of basketball sports, scholars, experts and analysts have unanimously agreed that players who have better team performance than that of their contemporary and previous teams show superior performance, both individually and collectively (Singer et al., 2016). Undoubtedly, the performance of sports teams has now become one of the hottest topics for research and discussion among experts, researchers and academics. Researchers and practitioners have analyzed the crucial role of motivation in both profit and non-profit making organizations for several decades.

Motivation in the members of team proves to be beneficial for superior performance of teams. Motivation is the cause or logic behind people's willingness, actions, objectives, and goals. Thus, motivation is a person's direction, and inclination to a behavior or conduct that he or she is willing to repeat or it comprises a set of forces that stimulate such a behavior. Moreover, there are two kinds of motivation: extrinsic motivation and intrinsic motivation.

Extrinsic motivation in a person may be inspired or stimulated by events, situation, or by other individuals while intrinsic motivation may come from within the individual. Within the team members, motivation results in superior performance (Hu & Liden, 2015).

In attaining superior performance of teamwork in both profit and non-profit making organizations, self-efficacy in team members is much needed and has a good impact on their abilities and work performance. Albert Bandura, a well-known psychologist, originally proposed the concept of self-efficacy. According to him, self-efficacy is the personal judgment of a person to perform an action required to deal with a current or an expected situation. Kathy Kolbe proposes a similar concept of self-efficacy expressing belief in one's innate capabilities and giving value to one's specific set of mental and cognitive powers (Su, Lee, Tsai, & Lu, 2016). It also means the development of determination to deal with problems, to overcome obstacles which come in the way of using one's innate abilities for the achievement of common goals.

In the larger perspective, we can talk about self-efficacy for self-regulated learning and self-efficacy for achievement. The former has earned a lot of fame in several areas of human endeavors like business, education, social activities, and sports. Self-efficacy for self-regulated learning is taken as a belief which individuals have in their abilities to think beyond a situation and behave in the manner which are systematically linked with and oriented towards learning goals (Demirören, Turan, & Öztuna, 2016). The players with great sense of efficacy in their self-regulatory learning abilities have the belief that they can manage their circumstances and the time available effectively. They are also able to organize their actions, their work, are able to remove obstacle in the way of their success, reduce distractions, determine goals for themselves, watch their comprehension, seek help when needed, and can themselves create and maintain work context. All these attributes of self-efficacy for self-regulated learning are of remarkable importance to the creation and maintenance of motivation in individuals and the achievement of the superior performance of teamwork (Ejubović & Puška, 2019).

Likewise, the self-efficacy for achievement too plays a major role in the success of organizations (both profit and non-profit organizations). Self-efficacy for achievement is that concept of self-efficacy which implies the trust and belief in cognitive abilities, physical strengths, skills, and talents to set goals, and finally making efforts to gain achievement of goals (Mahasneh & Alwan, 2018). In organizations, different tasks are assigned to the personnel, which they are expected to accomplish efficiently. In the accomplishment of these tasks, the individuals have to fulfill many requirements and show an excellent effort for which they need a force to stimulate their abilities.

In the context of high-level performance among basketball players, both types contribute to building a high level of self-efficacy. The Self efficacy for self-regulated

learning motivates players to manage their circumstances and adapt to changes while self-efficacy for achievement helps them to give performance more than the expectation and outperform other similar teams to achieve competitive advantage.

Since the main focus of our study is on the achievement of high performance of teamwork in general and the teams of basketball players at a high level in particular. Hence, this study throws light on both kinds of self-efficacy in relation to motivation and teamwork performance. Both self-efficacy for self-regulated learning and self-efficacy for achievement are make a combined effort to reshape players' actions, instill confidence in them to out-perform and learn better ways to accomplish the task in a more efficient manner (Konak, Kulturel-Konak, & Cheung, 2019). The study thus focuses on the mediating role of motivation between self-efficacy for self-regulated learning and self-efficacy for achievement and teamwork performance.

## **Literature review and hypotheses development**

There is no "I" in a team. It is an ancient motto and a grammatical concept that best applies to situations in sports. When a basketball coach sends a group of players into the court, he sends a team and not a group of individual players. It is this spirit that all coaches in the sports spectrum must focus on (Dunbar, Dingel, Dame, Winchip, & Petzold, 2018). Moreover, the formation of teams brings people together and can reap a lot of psychological and physical benefits within as well as outside the game. The team is successful in achieving its set goals and the members can perform their functions only if they have great motivation to work together with a collective goal in the interest of the team, not in the interest of one individual. As the team is a group of people, the performance and success of the teamwork are dependent on its members, their emotional, cognitive, and physical properties (Ballen, Wieman, Salehi, Searle, & Zamudio, 2017). The confidence in one's abilities and cognitive strengths either for self-regulated learning or for achievement improves the performance of team members and overall performance of the team.

In the achievement of motivation, self-efficacy for self-regulated learning plays a crucial role. The word motivation has been derived from the word "motive" which is taken as a need that requires fulfillment (Agwu, 2015). These needs may be wants or wishes that are acquired through a change in nature and culture. In other words, motivation is the force that acts behind a motive. In any organization, whether it's basic objective is to earn profits or not, work motivation in personnel shows a positive influence on their work performance.

Based on the understanding of self-efficacy and motivation and their role in the context of basketball, a few hypotheses can be developed.

1. Cleary and Kitsantas (2017) assert that the creation or presence of confidence or self-efficacy in individuals arouses motivation in them. Self-efficacy is thus the belief of an individual in his abilities to learn from situations, own experience, others' experience, set rules, refer to many sources of knowledge and information, and use the cognitive strengths to learn more and use this learning in the practical field. A higher self-efficacy in learning through cognitive powers arouses an ability in individual players to work faster and efficiently as it helps them getting knowledge about their specific tasks so they may prove to be more productive. Moreover, the confidence in one's better learning skills creates motivation in the individual player to bring innovation in their equipment, moves, attitudes, and strategies to compete with rival players (Fadlelmula, Cakiroglu, & Sungur, 2015). Furthermore, a high learning capability is also a result of higher efficacy that motivates individual player in basketball to never miss any course of action and work with great responsibility and willingness for the reputation of the team. Hence, the hypothesis can be stated thus

*H1: Self-efficacy for self-regulated learning has a positive association with motivation in players.*

2. Zhang et al. (2015) performed long investigations and established that self-efficacy for achievement creates a consistent motivational force in individuals in any sector (business, education, advocacy or sports) to adopt a behavior adaptive to the up-to-date requirements and focus on the work for the accomplishment of the task assigned. Self-efficacy is thus the confidence of individuals to achieve the set goals and to accomplish the specific task. Moreover, the confidence to succeed affects the willingness, desire, and power of individuals to perform the set of tasks assigned to them. The sense of certainty of success at the end of the mission creates happiness in individuals, and positive emotions affect the working speed and quality of individuals. The mission of basketball players is to perform better in the court and earn a good name not only in the homeland but also across the world while competing with the rival teams playing in the same game. The success of their mission is dependent on their willingness and their intention to perform effectively and efficiently, and finally achieve the goal. The self-efficacy arouses this willingness for achievement (Skaalvik, Federici, & Klassen, 2015). A further analysis of the behavior of high-level basketball players towards their goals indicates that the presence of high self-efficacy in players for achievement creates a higher level of motivation in them to raise the level of reputation

and to adopt innovative techniques and innovative resource, and show positive behavior while practicing and playing. Hence, the second hypothesis can be stated thus

*H2: Self-efficacy for achievement is positively linked with motivation.*

3. The chances for success in any sector increases with the establishment of different teams for different specific tasks. The team performance determines success or failure, fame, or defame of a team, and the performance of team members. As proposed by Hu and Liden (2015), motivation in team members is reflected by their performance and overall team performance. For example, if people are motivated to work with greater speed and more effectively, they can be more productive for the team. In addition, the motivation for better work and performance leads individuals to make better strong and productive relationships among themselves and better internal and external communication which shows superior team performance. Besides the willingness to work in the interest of the team results in a better allocation of resources and a positive approach to equality which indicates better teamwork performance (Osabiya, 2015). The performance of the teams of high-level basketball players is improved by the motivational performance of individual basketball players. Hence, another hypothesis of this study can be stated thus:

*H3: Motivation makes a positive influence on team performance.*

4. In 1986 Bandura in his social cognitive theory proposed a model on human functions in which self-regulatory factors are shown of considerable importance. Researchers have given a deeper insight over the past three decades to examine how these self-regulatory factors function in learning contexts. The results have proved that self-regulatory factors depend much on confidence of team members in their cognitive abilities to acquire knowledge from their own experiences as well as from others' experiences and from the multiple sources in the environment. In sports, self-efficacy for self-regulated learning requires a leadership which binds all the team members on a common objective to win match and reputation. Similarly, self-efficacy arouses the ability of effective decision making on any matter and ability to solve the problems as supported by Easley, Devaraj, and Crant (2003). Moreover, having confidence in self-abilities to teach more and more lead the team member to have open and clear communication. With better learning, the individual can

interchange their functions at the time of need while practicing or playing at the pitch. Self-efficacy for self-regulated learning makes the team members aware of the goals of the team, which further leads to team performance (Hopp & Stephan, 2012). The self-efficacy for self-regulated learning also creates determination in the team members to perform even complicated tasks and put great efforts to achieve the goals of the team. To sum, just like other sports teams, self-efficacy for self-regulated learning improves performance in the basketball team too. Hence, the next hypothesis can be stated thus:

*H4: Self-efficacy for self-regulated learning has a positive association with team performance.*

5. Modern world is a world of high competition where almost all people want to succeed in their specific tasks and relevant fields. To survive in the relevant industry and to compete with the rivals to show better performance, entities set goals and accomplish them effectively and efficiently. In this context, the presence of self-efficacy for achievement of team members guarantees the superior performance of the team. Self-efficacy for achievement is the concept which implies confidence in one's cognitive and physical capabilities to achieve targets and accomplish the set tasks (Purzer, 2011). The persons who can set goals and have confidence in their abilities to achieve targets are more productive as their confidence and belief in their abilities and skills make them stronger and more talented. In sports particularly, self-efficacy for achievement ensures not only achieving superior performance but also it makes sports persons active even in tough circumstances and steadfast despite all hardships. Such activeness and steadfastness shown by team members result in sustainable performance of the team (Sonnentag and Volmer, 2009). Self-efficacy also primarily leads the coach of the team to instill a spirit of collaboration among team members that helps in clarifying the team goals. Self-efficacy develops cooperation among team members to solve problems and remove obstacles which come in the way of success. In other words, self-efficacy in the coach as well as the members of a basketball team can result in better team performance. Hence, the related hypothesis can be stated thus:

*H5: Self-efficacy for achievement has a positive linkage with team performance.*

6. Both self-efficacy for self-regulated learning and self-efficacy for achievement create motivation in in team members and thus affect teamwork

performance. First, self-efficacy for self-regulated learning creates motivation in individuals to work for the interest of the team and achievement of its goals. The willingness, desire, and ability to perform different tasks efficiently are influenced by their confidence in their cognitive abilities developed through self-experience, others' experience, surroundings, and other reliable resources. Motivation created in this matter contributes to the performance of the teamwork (Osabiya, 2015). Second, self-efficacy for achievement is the belief in the cognitive abilities of the team members to achieve the set target efficiently. The confidence in their abilities by team members to succeed helps them focus on their role and functions, and helps the other team members to perform and if required interchange responsibilities mutually. In this situation, there is a proper relationship and communication between team members. There is also a participative leadership in the form of the coach, who possess quick and right decision making skills as well as problem-solving skills. Thus, the motivation created by self-efficacy for self-regulated learning and self-efficacy for achievement improves the performance of teamwork (Asproni, 2004).

Hence, the mediating role of motivation between these variables can be hypothesized thus:

*H6: Motivation is a mediator between self-efficacy for self-regulated learning and team performance.*

*H7: Motivation plays a mediating role between self-efficacy for achievement and team performance.*

## **Methodology**

The purpose of the ongoing research is to investigate the impact of self-efficacy for self-regulated learning and self-efficacy for achievement on motivation and team performance and examine the mediating role of motivation among the nexus of self-efficacy for self-regulated learning, self-efficacy for achievement and team performance of high-level basketball players. The data was gathered by using the questionnaires from different basketball team players. These players were selected based on simple random sampling and survey questionnaires were sent to them by mail and also by personal visit. A total of 420 surveys were sent to them but only 270 were returned which represents 64.29 per cent response rate. The Smart-PLS was executed for data analysis because in this research hypotheses and complex models have been adopted (Hair Jr, Sarstedt, Ringle, & Gudergan, 2017).

This research made use of two predictors such as self-efficacy for self-regulated learning (SESRL) which had

eleven items in the questionnaire (Zimmerman & Martinez-Pons, 1988) and self-efficacy for achievement (SEA) which had nine items (Zimmerman, Bandura, & Martinez-Pons, 1992). In addition, motivation (MV) was taken as the mediator that had three items (Yusuf, 2011) and team

performance (TP) was used as the predictive variable that had five items (Van Kleef et al., 2009). These constructs are shown in the theoretical model (Figure 1), along with their relationships.

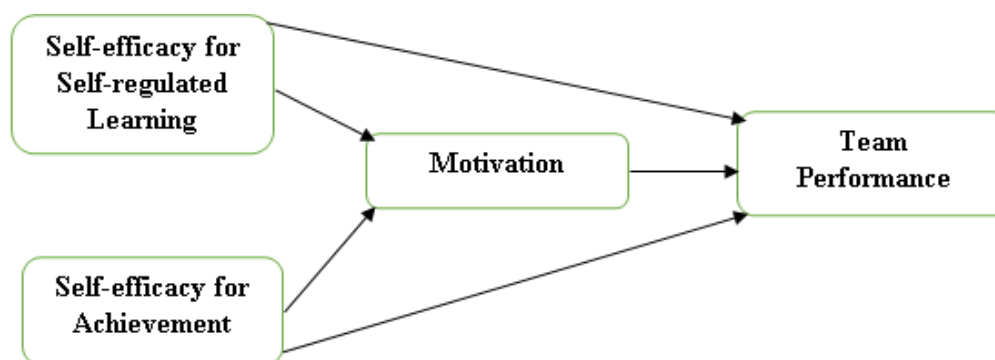


Figure 1: Theoretical model

## Results

The results of the ongoing research are shown as the measurement and structural model assessment using the convergent and discriminant validity and path analysis.

As a first step, the convergent validity was examined to determine the correlation among items. The values obtained

Table 1:

Convergent validity

Constructs	Items	Loadings	Alpha	CR	AVE
Motivation	MV1	0.869	0.875	0.923	0.799
	MV2	0.927			
	MV3	0.885			
Self-efficacy for Achievement	SEA1	0.925	0.948	0.958	0.722
	SEA2	0.542			
	SEA3	0.911			
	SEA4	0.931			
	SEA5	0.909			
	SEA6	0.874			
	SEA7	0.637			
	SEA8	0.903			
	SEA9	0.920			
Self-efficacy for self-regulated Learning	SESRL1	0.795	0.903	0.920	0.536
	SESRL10	0.748			
	SESRL11	0.676			
	SESRL2	0.753			
	SESRL4	0.783			
	SESRL5	0.762			
	SESRL6	0.702			
	SESRL7	0.670			
SESRL8	0.712				

show that Alpha and CR values had crossed standards increasing to more than 0.70, and loadings and AVE were also crossing the limits such as more than 0.50. These are the pieces of evidence of the high correlation between items and a strong convergent validity. These values are mentioned in Table 1.

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Constructs	Items	Loadings	Alpha	CR	AVE
Team Performance	SESRL9	0.708			
	TP1	0.889	0.882	0.919	0.741
	TP3	0.734			
	TP4	0.907			
	TP5	0.901			

Secondly, discriminant validity was examined to measure the correlation among variables by using the Fornell Larcker and cross-loadings techniques. The values indicate that the statistics exposing the nexus with variable itself are larger

than the statistics exposing the nexus with other variables. These are evidence of the low correlation between variables and a strong discriminant validity. These values are mentioned in Table 2 and Table 3.

**Table 2:**  
Fornell Larcker

	MV	SEA	SESRL	TP
MV	0.894			
SEA	0.636	0.850		
SESRL	0.613	0.721	0.732	
TP	0.671	0.688	0.705	0.861

**Table 3:**  
Cross-loadings

	MV	SEA	SESRL	TP
MV1	<b>0.869</b>	0.594	0.581	0.666
MV2	<b>0.927</b>	0.588	0.565	0.567
MV3	<b>0.885</b>	0.515	0.489	0.555
SEA1	0.450	<b>0.925</b>	0.631	0.598
SEA2	0.733	<b>0.542</b>	0.502	0.518
SEA3	0.372	<b>0.911</b>	0.593	0.541
SEA4	0.432	<b>0.931</b>	0.628	0.574
SEA5	0.465	<b>0.909</b>	0.635	0.576
SEA6	0.427	<b>0.874</b>	0.575	0.597
SEA7	0.821	<b>0.637</b>	0.602	0.498
SEA8	0.466	<b>0.903</b>	0.607	0.628
SEA9	0.434	<b>0.920</b>	0.609	0.614
SESRL1	0.540	0.707	<b>0.795</b>	0.571
SESRL10	0.443	0.380	<b>0.748</b>	0.479
SESRL11	0.333	0.269	<b>0.676</b>	0.477
SESRL2	0.444	0.376	<b>0.753</b>	0.520
SESRL4	0.468	0.673	<b>0.783</b>	0.488
SESRL5	0.424	0.580	<b>0.762</b>	0.493
SESRL6	0.352	0.528	<b>0.702</b>	0.485
SESRL7	0.464	0.701	<b>0.670</b>	0.635
SESRL8	0.445	0.608	<b>0.712</b>	0.476
SESRL9	0.524	0.371	<b>0.708</b>	0.492
TP1	0.441	0.625	0.613	<b>0.889</b>
TP3	0.822	0.646	0.598	<b>0.734</b>
TP4	0.479	0.544	0.592	<b>0.907</b>
TP5	0.471	0.506	0.592	<b>0.901</b>

The discriminant validity was also examined by using the Heterotrait Monotrait (HTMT) ratio. The figures highlight that the values are smaller than 0.90. These are evidence of

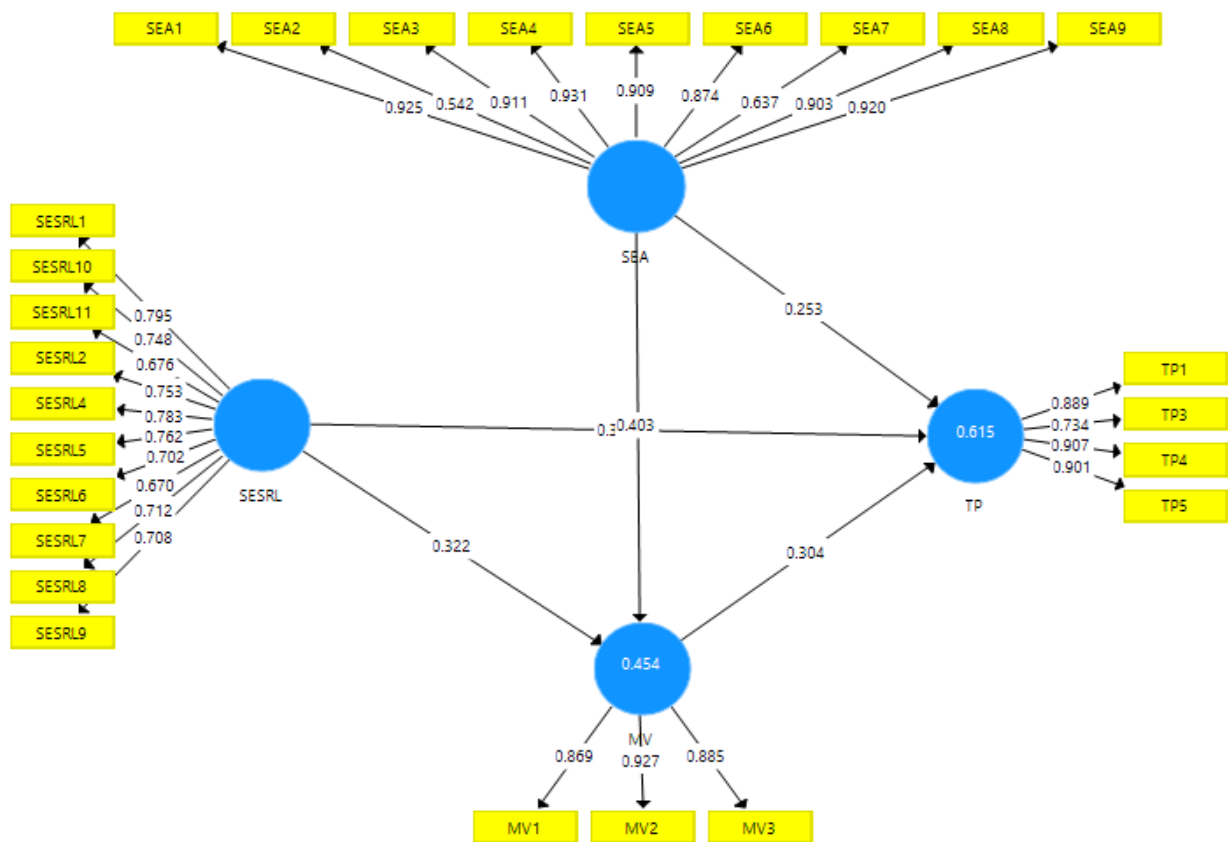
the low correlation between variables and valid discriminant validity. These values are mentioned in Table 4 and Figure 2.

**Table 4:**  
 Heterotrait Monotrait ratio

	MV	SEA	SESRL	TP
MV				
SEA	0.665			
SESRL	0.679	0.758		
TP	0.729	0.731	0.776	

Finally, the path analysis method was used to examine the structural model, and the results revealed that self-efficacy for self-regulated learning and self-efficacy for achievement had a positive association with motivation and hence H1 and H2 are accepted. In addition, the results also revealed that motivation, self-efficacy for self-regulated learning, and self-efficacy for achievement had a positive

association with team performance; hence the H3, H4 and H5 are also accepted. Moreover, the findings also exposed that the motivation positively mediated among the nexus of self-efficacy for self-regulated learning, self-efficacy for achievement and team performance; hence the H6 and H7 are also accepted. These links are illustrated in Table 5 and Figure 3.



**Figure 2:** Measurement model assessment

**Table 5:**  
 Path analysis

Relationships	Beta	S.D.	t-statistics	p-values	L.L.	U.L.
MV -> TP	0.304	0.079	3.872	0.000	0.146	0.451
SEA -> MV	0.403	0.073	5.497	0.000	0.268	0.552
SEA -> TP	0.253	0.099	2.550	0.011	0.014	0.404
SESRL -> MV	0.322	0.080	4.047	0.000	0.156	0.477
SESRL -> TP	0.336	0.083	4.024	0.000	0.197	0.503
SEA -> MV -> TP	0.123	0.048	2.582	0.010	0.047	0.237
SESRL -> MV -> TP	0.098	0.026	3.804	0.000	0.045	0.147

## Discussion and Implication

The results of this study indicate that self-efficacy for self-regulated learning has a positive association with motivation. These results are in line with the past studies Littlejohn, Hood, Milligan, and Mustain (2016) which also put stress on the role of self-efficacy for self-regulated learning in the achievement of motivation in the team members. The results also reveal that self-efficacy for achievement has a positive association with motivation. These results agree with the previous studies Joo, Oh, and Kim (2015), where it has been shown that self-efficacy for achievement creates motivation in the personnel. Moreover, the results have also indicated that self-efficacy for self-regulated learning makes positive influence on teamwork performance. These results are in line with the previous studies Musinguzi et al. (2018), which prove that self-efficacy for self-regulated learning improves the performance of teams.

Furthermore, the results also suggest that teamwork performance is better than any prior performance in the presence of self-efficacy for achievement. These results agree with the results of past studies Cambridge-Williams, Winsler, Kitsantas, and Bernard (2013), which have also proved the significant role of self-efficacy for achievement in attaining teamwork performance. In addition, these results also indicate that motivation in teams has a positive linkage

with teamwork performance. These results are consistent with the studies of Valencia-Vallejo, López-Vargas, and Sanabria-Rodríguez (2018) where it has been shown that motivation improves teamwork performance among team members. Besides, these results indicate that motivation is a mediator between self-efficacy for self-regulated learning and self-efficacy for achievement and teamwork performance. These results are in line with the past studies Tabassi, Ramli, and Bakar (2011) that reveal that self-efficacy for self-regulated learning and self-efficacy for achievement create motivation among team members which improves teamwork performance.

This study was carried out with both theoretical and empirical implications. From the theoretical point of view, the study contributed to the literature on the management of both profit and non-profit making organizations. The study throws light on the influences of self-efficacy for self-regulated learning and self-efficacy for achievement on motivation and teamwork performance. While on the other hand, this study makes an empirical implication by giving guidance to the management on how to instill motivation in the personnel with self-efficacy for self-regulated learning efficacy and how to achieve higher teamwork performance with self-efficacy for self-regulated learning, self-efficacy for achievement, and motivation in team members.

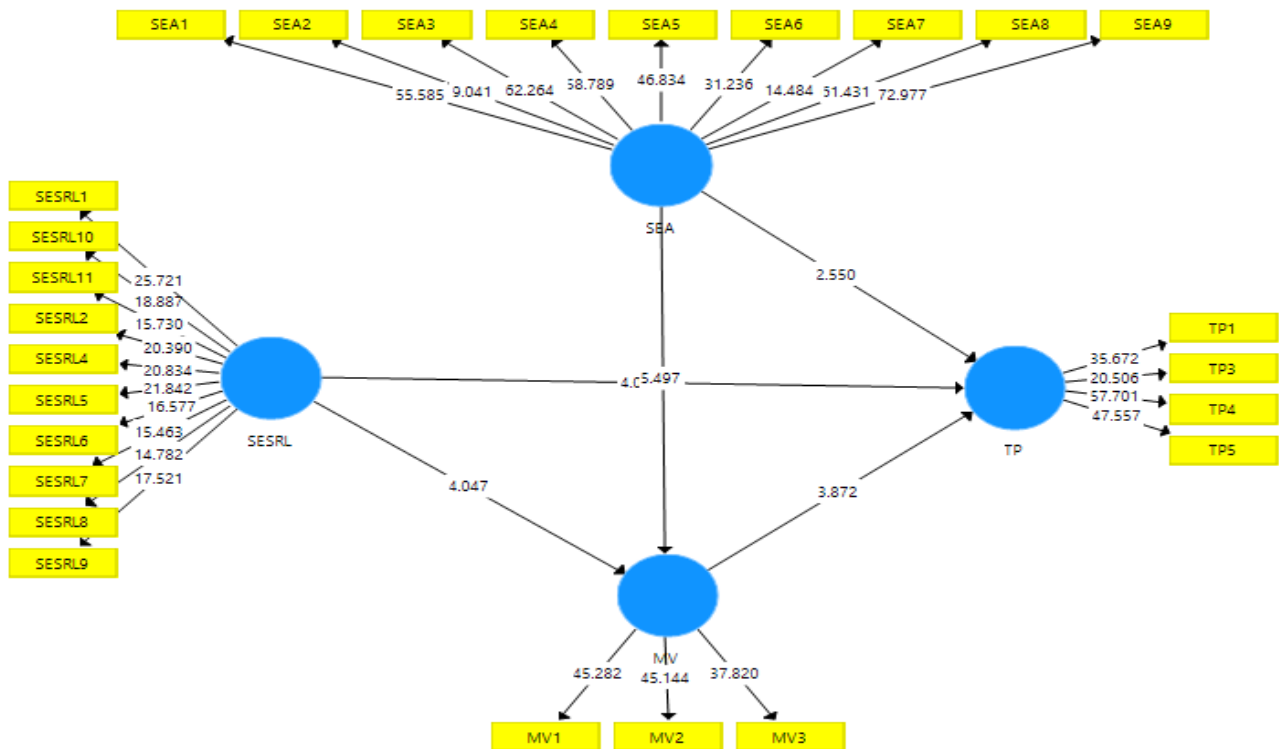


Figure 3: Structural model assessment



## Conclusion and Limitation

To sum up, this study proves that self-efficacy for self-regulated learning is positively associated with motivation among organizational personnel. The study has examined how self-efficacy for self-regulated learning can create motivation among employees. The results suggest that self-efficacy for achievement also has a positive relationship with motivation among employees. It is also evident from the findings that motivation in team members improves the performance of teamwork. Moreover, these results indicate that self-efficacy for self-regulated learning puts positive influence on the performance of teamwork and so does the self-efficacy for achievement. Besides, it was also proved in this study that motivation is a considerable mediator between self-efficacy for self-regulated learning along with self-efficacy for achievement and the performance of teamwork.

Though the study has described in detail influences of self-efficacy on self-regulated learning and self-efficacy for achievement on the motivation and thereby on the performance of teamwork, yet there are many other factors which also play a crucial role in the achievement of motivation and higher teamwork performance. Future scholars are recommended to address these unexplored areas of motivation and teamwork performance in their investigation. Moreover, motivation has been used here in this study as a mediator between self-efficacy for self-regulated learning along with self-efficacy for achievement and teamwork performance. Future scholars should present the same variable as a moderator between independent and dependent variables. Besides, the data for this study has been collected from a single source, while future academics may utilize multiple sources for the collection of data.

## References

- Agwu, M. O. (2015). Teamwork and employee performance in the bonny Nigeria liquefied natural gas plant. *Strategic Management Quarterly*, 3(4), 39-60. <http://dx.doi.org/10.15640/smq.v3n4a3>
- Asproni, G. (2004). Motivation, teamwork, and agile development. *Agile Times*, 4(1), 8-15.
- Ballen, C. J., Wieman, C., Salehi, S., Searle, J. B., & Zamudio, K. R. (2017). Enhancing diversity in undergraduate science: Self-efficacy drives performance gains with active learning. *CBE—Life Sciences Education*, 16(4), 56-76. <https://doi.org/10.1187/cbe.16-12-0344>
- Bomani, M., Fields, Z., & Derera, E. (2019). The Role of Higher Education Institutions in the Development of SMEs in Zimbabwe. *International Journal of Business and Management Studies*, 11(2), 1-15.
- Basilgan, M., & Akman, A. S. (2019). An Empirical Analysis On The Impact Of The Foreign Direct Investments On Export Performance: Turkey Case. *International Journal of Economics and Finance Studies*, 11(2), 89-105.
- Cambridge-Williams, T., Winsler, A., Kitsantas, A., & Bernard, E. (2013). University 100 orientation courses and living-learning communities boost academic retention and graduation via enhanced self-efficacy and self-regulated learning. *Journal of College Student Retention: Research, Theory & Practice*, 15(2), 243-268. <https://doi.org/10.2190/CS.15.2.f>
- Cleary, T. J., & Kitsantas, A. (2017). Motivation and self-regulated learning influences on middle school mathematics achievement. *School Psychology Review*, 46(1), 88-107. <https://doi.org/10.1080/02796015.2017.12087607>
- Cooper, S., Cant, R., Connell, C., Sims, L., Porter, J. E., Symmons, M., Liaw, S. Y. (2016). Measuring teamwork performance: Validity testing of the Team Emergency Assessment Measure (TEAM) with clinical resuscitation teams. *Resuscitation*, 101, 97-101. <https://doi.org/10.1016/j.resuscitation.2016.01.026>
- Demirören, M., Turan, S., & Öztuna, D. (2016). Medical students' self-efficacy in problem-based learning and its relationship with self-regulated learning. *Medical education online*, 21(1), 300-349. <https://doi.org/10.3402/meo.v21.30049>
- Dunbar, R. L., Dingel, M. J., Dame, L. F., Winchip, J., & Petzold, A. M. (2018). Student social self-efficacy, leadership status, and academic performance in collaborative learning environments. *Studies in Higher Education*, 43(9), 1507-1523. <https://doi.org/10.1080/03075079.2016.1265496>
- Easley, R. F., Devaraj, S., & Crant, J. M. (2003). Relating collaborative technology use to teamwork quality and performance: An empirical analysis. *Journal of Management Information Systems*, 19(4), 247-265. <https://doi.org/10.1080/07421222.2003.11045747>
- Ejubović, A., & Puška, A. (2019). Impact of self-regulated learning on academic performance and satisfaction of students in the online environment. *Knowledge Management & E-Learning: An International Journal*, 11(3), 345-363.
- Fadlelmula, F. K., Cakiroglu, E., & Sungur, S. (2015). Developing a structural model on the relationship among motivational beliefs, self-regulated learning strategies, and achievement in mathematics. *International journal of science and mathematics education*, 13(6), 1355-1375. <https://doi.org/10.1007/s10763-013-9499-4>
- Gilfoyle, E., Koot, D. A., Annear, J. C., Bhanji, F., Cheng, A., Duff, J. P., Kotsakis, A. (2017). Improved clinical performance and teamwork of pediatric interprofessional resuscitation teams with a simulation-based educational intervention. *Pediatric Critical Care Medicine*, 18(2), 62-69. <https://doi.org/10.1097/PCC.0000000000001025>

- Gürel, D., & Çetin, T. (2019). A qualitative study on the opinions of 7th grade students on intangible cultural heritage. *Review of International Geographical Education Online*, 9(1), 36-62.
- Hair Jr, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2017). *Advanced issues in partial least squares structural equation modeling*: Sage publications.
- Hopp, C., & Stephan, U. (2012). The influence of socio-cultural environments on the performance of nascent entrepreneurs: Community culture, motivation, self-efficacy and start-up success. *Entrepreneurship & Regional Development*, 24(10), 917-945. <https://doi.org/10.1080/08985626.2012.742326>
- Hu, J., & Liden, R. C. (2015). Making a difference in the teamwork: Linking team prosocial motivation to team processes and effectiveness. *Academy of Management Journal*, 58(4), 1102-1127. <https://doi.org/10.5465/amj.2012.1142>
- Joo, Y. J., Oh, E., & Kim, S. M. (2015). Motivation, instructional design, flow, and academic achievement at a Korean online university: A structural equation modeling study. *Journal of Computing in Higher Education*, 27(1), 28-46. <https://doi.org/10.1007/s12528-015-9090-9>
- Konak, A., Kulturel-Konak, S., & Cheung, G. W. (2019). Teamwork attitudes, interest and self-efficacy between online and face-to-face information technology students. *Team Performance Management: An International Journal*, 25(6), 253-278. <https://doi.org/10.1108/TPM-05-2018-0035>
- Kardas, F., Cam, Z., Eskisu, M., & Gelibolu, S. (2019). Gratitude, Hope, Optimism and Life Satisfaction as Predictors of Psychological Well-Being. *Eurasian Journal of Educational Research*, 82, 81-99.
- Konstantinis, A., Rozakis, S., Maria, E. A., & Shu, K. (2018). A definition of bioeconomy through bibliometric networks of the scientific literature. *AgBioForum*, 21(2), 64-85.
- Littlejohn, A., Hood, N., Milligan, C., & Mustain, P. (2016). Learning in MOOCs: Motivations and self-regulated learning in MOOCs. *The Internet and Higher Education*, 29, 40-48. <https://doi.org/10.1016/j.iheduc.2015.12.003>
- Mahasneh, A. M., & Alwan, A. F. (2018). The Effect of Project-Based Learning on Student Teacher Self-Efficacy and Achievement. *International Journal of Instruction*, 11(3), 511-524. <https://doi.org/10.12973/iji.2018.11335a>
- Musinguzi, C., Namale, L., Rutebemberwa, E., Dahal, A., Nahirya-Ntege, P., & Kekitiinwa, A. (2018). The relationship between leadership style and health worker motivation, job satisfaction and teamwork in Uganda. *Journal of healthcare leadership*, 10, 21-42. <https://doi.org/10.2147/JHL.S147885>
- Muñoz, F. F. (2019). Predictibilidad y auto-semejanza en la demanda de destinos turísticos maduros: el caso de Tenerife. *Cuadernos de Economía*, 42(118).
- O'Neill, T. A., & Salas, E. (2018). Creating high performance teamwork in organizations. *Human resource management review*, 28(4), 325-331. <https://doi.org/10.1016/j.hrmr.2017.09.001>
- Ortega-Toro, E., Bernal-Polo, J., Gomez-Ruano, M. A., Gimenez-Egido, J. M., & Verdú-Conesa, I. (2019). Relationship between age and performance and participation in high performance basketball players. *Revista de Psicología del Deporte*, 28(3), 113-118.
- Osabiya, B. J. (2015). The effect of employees motivation on organizational performance. *Journal of public administration and policy research*, 7(4), 62-75. <https://doi.org/10.5897/JAPR2014.0300>
- Purzer, Ş. (2011). The relationship between team discourse, self-efficacy, and individual achievement: A sequential mixed-methods study. *Journal of Engineering Education*, 100(4), 655-679. <https://doi.org/10.1002/j.2168-9830.2011.tb00031.x>
- Singer, S. J., Molina, G., Li, Z., Jiang, W., Nurudeen, S., Kite, J. G., Berry, W. R. (2016). Relationship between operating room teamwork, contextual factors, and safety checklist performance. *Journal of the American College of Surgeons*, 223(4), 568-580. <https://doi.org/10.1016/j.jamcollsurg.2016.07.006>
- Sarkın, D. B. Ş., & Gülleroğlu, H. D. (2019). Anxiety in Prospective Teachers: Determining the Cut-off Score with Different Methods in Multi-Scoring Scales. *Educational Sciences: Theory & Practice*, 19(1).
- Šrakar, A. (2018). Internal and External Factors in the Development of a Network Organization in the Arts: Case Study of Društvo Asociacija. *Croatian International Relations Review*, 24(82), 90-116.
- Skaalvik, E. M., Federici, R. A., & Klassen, R. M. (2015). Mathematics achievement and self-efficacy: Relations with motivation for mathematics. *International Journal of Educational Research*, 72, 129-136. <https://doi.org/10.1016/j.ijer.2015.06.008>
- Sezgin, M., & Cesur, A. B. (2019). Website Usage In Digital Public Relations—An Analysis Of It Companies In Turkey. *International Journal Of Ebusiness And Egovernment Studies*, 11(2), 134-149.
- Sonnentag, S., & Volmer, J. (2009). Individual-level predictors of task-related teamwork processes: The role of expertise and self-efficacy in team meetings. *Group & Organization Management*, 34(1), 37-66. <https://doi.org/10.1177/1059601108329377>
- Sonoda, Y., Onozuka, D., & Hagihara, A. (2018). Factors related to teamwork performance and stress of operating room nurses. *Journal of nursing management*, 26(1), 66-73. <https://doi.org/10.1111/jonm.12522>
- Su, J.-M., Lee, S.-C., Tsai, S.-B., & Lu, T.-L. (2016). A comprehensive survey of the relationship between self-efficacy and performance for the governmental auditors. *SpringerPlus*, 5(1), 508-521. <https://doi.org/10.1186/s40064-016-2104-x>
- Tabassi, A. A., Ramli, M., & Bakar, A. H. A. (2011). Training, motivation and teamwork improvement: The case of construction firms. *African journal of business management*, 5(14), 5627-5636. <https://doi.org/10.5897/AJBM10.1343>

- Valencia-Vallejo, N., López-Vargas, O., & Sanabria-Rodríguez, L. (2018). Effect of Motivational Scaffolding on E-Learning Environments: Self-Efficacy, Learning Achievement, and Cognitive Style. *Journal of Educators Online*, 15(1), 1-14.
- Van Kleef, G. A., Homan, A. C., Beersma, B., Van Knippenberg, D., Van Knippenberg, B., & Damen, F. (2009). Searing sentiment or cold calculation? The effects of leader emotional displays on team performance depend on follower epistemic motivation. *Academy of Management journal*, 52(3), 562-580. <https://doi.org/10.5465/amj.2009.41331253>
- Vyas-Doorgapersad, S. (2019). Gender equality for achieving Sustainable Development Goal One (no Poverty) in South African municipalities. *The International Journal of Social Sciences and Humanity Studies*, 11(1), 84-98.
- Yusuf, M. (2011). The impact of self-efficacy, achievement motivation, and self-regulated learning strategies on students' academic achievement. *Procedia-Social and Behavioral Sciences*, 15, 2623-2626. <https://doi.org/10.1016/j.sbspro.2011.04.158>
- Zhang, Z.-J., Zhang, C.-L., Zhang, X.-G., Liu, X.-M., Zhang, H., Wang, J., & Liu, S. (2015). Relationship between self-efficacy beliefs and achievement motivation in student nurses. *Chinese Nursing Research*, 2(2-3), 67-70. <https://doi.org/10.1016/j.cnre.2015.06.001>
- Zimmerman, B. J., Bandura, A., & Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American educational research journal*, 29(3), 663-676. <https://doi.org/10.3102/00028312029003663>
- Zimmerman, B. J., & Martinez-Pons, M. (1988). Construct validation of a strategy model of student self-regulated learning. *Journal of educational psychology*, 80(3), 284-290. <https://doi.org/10.1037/0022-0663.80.3.284>