Leadership in Botball
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1 Being a Good Leader

Merriam-Webster defines a leader as someone who directs the operations, activities, or performance of a group.[1] However, a good leader is much more than that. A leader must immerse himself or herself in every aspect of the project he or she is working on. A leader does not simply delegate tasks but, rather, helps work towards the completion of those tasks. A leader should not be feared; instead he or she must be well liked amongst the team. A leader should be easy to talk to when dealing with various problems.

A good leader must know when to be serious and when to have fun. An example of such a leader is Steve Goodgame, Executive Director for the KISS Institute of Practical Robots. He knows when to work, and when it is time to have a little fun. As seen in Figure 1, Steve donned a blonde wig while judging a Northern California Regional competition. He has also showed off his fun side by playing Rock Band at last years GCER competition.

Figure 1 [2]

2 Being a Leader on a Botball Team

On top of having a team mentor, whether it be a coach, parent, or teacher, a team needs one of its own members to assume the role of student leader. This student leader could either be the captain of the team or the president of the club. The person should either be elected by the team or be chosen by the previous leader as his or her successor. The captain or president does not have to be the only person to help lead the team. In addition to the president, there can be a vice president, secretary, and/or treasurer. In the captain system, there can be a second co-captain or other officer positions for underclassmen. Typically, a leader is an upperclassman, although this is not always the case. For example, I was a co-captain during my sophomore year and our team's captain as a junior.

A leader must be fully committed to the robotics club or team. Even though a student is probably involved in many other activities, robotics ought to be his or her main focus. The student leader should be the main source of communication between the team mentor and the team members. He or she should have emails and phone numbers of the team members. The leader should call and organize meetings before, during, and after the season ends.

3 Mentor and Student Leader Relationship

A close relationship needs to be formed between the team leader and the team mentor. The team leader and the team mentor need to develop a relationship that goes beyond the typical student-teacher or student-coach relationship. The two should communicate on a regular basis, coming to a mutual decision about how and when they will do this. The student leader and team mentor must compromise with each others schedules. Meetings must be called to fit the needs of both the team and the mentor. Without the team mentor, there is no team. The team mentor deserves much respect and praise for all the hard work and time he or she puts in to make the team possible. The mentor has the tough task of coordinating all the miscellaneous aspects of the team such as trip planning and fundraisers. My mentor Mr. Caristinos and I have, what I would call, a good student-mentor relationship. (Figure 2).

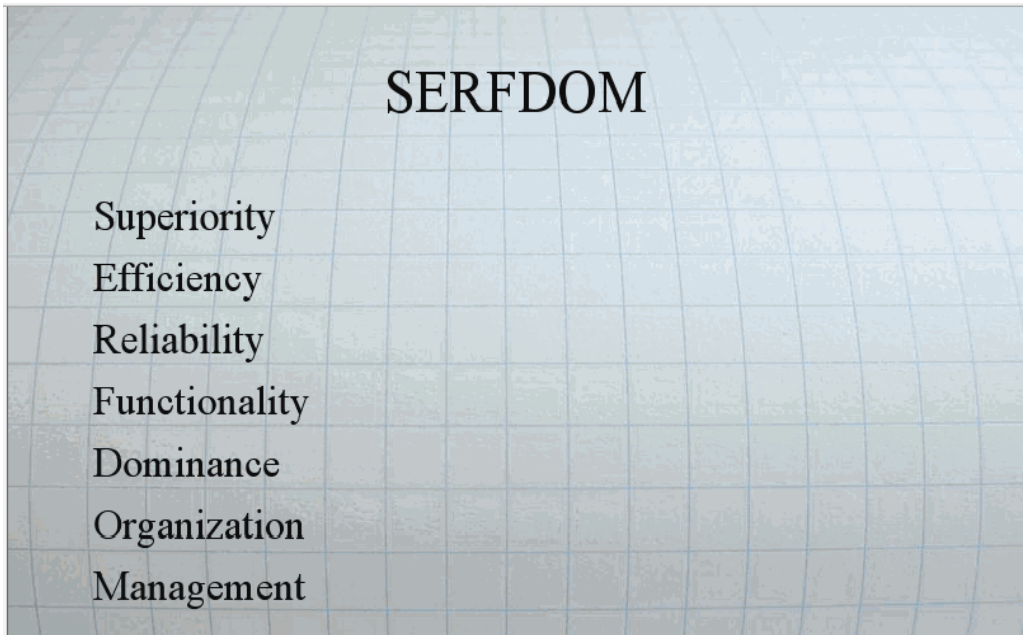
Figure 2
(Spanish Club Moderator Mrs. Maria Crotty pictured in center)

4 Team Structure

Each team will have its own unique and individual structure. The team structure depends on its number and type of members. A small team of three to five members will be structured much differently from a team of ten to fifteen members. A small team will have to allocate much more work to each member, while a large team can have large tasks divided up among a few members. A large team can break down tasks for both mechanical and programming for each robot. For example, there is a designated leader for CBC programming, create programming, CBC mechanical, and create mechanical. A smaller team may have one person working on each of those tasks instead of a team leader.

My team is said to be structured like that of serfdom. At the top is the “king”, or the team captain. I serve as the captain of my team. Next are the “nobles,” who are in charge of specific tasks, such as the CBC robot or documentation. Last are the “serfs,” who work on tasks under the command of nobles. Serfdom can also be used as an acronym to describe our team as seen in figure 3.

Figure 3



Each of the letters of Serfdom represents a characteristic of how the team functions. With the concept of superiority, everyone on the team follows the team captain, myself, because I am the most knowledgeable. With efficiency, everyone has their own task to complete which is done in a productive and efficient way. With reliability, everyone can always rely on the person above them for support and backup. Much like efficiency, functionality means that we have a system used to figure out who is completing their tasks. The idea behind dominance is that freshmen must listen to the people above them, because the upperclassmen know the logic behind most things. For organization, we have a system organized so that each person has an individual task that meets their skill level. Finally, with management, we have our team set up so that team leaders do not constantly have to check up on every member of the team because they have people in the middle.

5 Motivation

In order for a team to do well, they must be motivated by their leader. There are two types of motivation: negative and positive. Typically positive motivation is the best option, although negative motivation is sometimes necessary. Positive motivation could occur when a task is completed much earlier than expected and the person is praised for his or her efforts. Also, a person could develop a unique solution to a complicated problem and be lauded for his or her ingenuity. Individual team members should be given awards for success in their individual tasks. If there is an annual school-wide awards ceremony, a school's team ought to give out three awards; one for mechanical, one for programming, and one for documentation. The underclassmen who best demonstrate their success in the mechanical, programming, and documentations fields receive these awards.

6 Helping Others

A good team leader not only helps his or her team, but other teams as well. At the regional competitions, team leaders should reach out to rookie and amateur teams to help them with any problems or difficulties that may arise. Teams may need help with their light sensors or even the simple task of a shut_down_in() command. At last year's regional competition, the Malden Catholic team won the Botball Team Mentoring Award for assisting other teams throughout the competition. If a team doesn't need immediate help, you should build a source of contact in the event that the team may need help in the future. By participating in the Botball community forums, a team leader can contribute their knowledge to help the rest of the Botball community.

7 Botball Youth Advisory Council

If a leader of a Botball team wants to go beyond merely helping his or her team, he or she can look to become a member of the Botball Youth Advisory Council. This is the perfect way for a team leader to make a bigger impact on the Botball community in the region. The Botball Youth Advisory Council, or YAC, is a group of twelve Botballers from different regions throughout the country. These students all work to improve the Botball community. The Council addresses various tasks for both the regional competitions and the Global Conference. The YAC also designed its own community website to further connect Botballers and provide a forum for them to receive help with various problems and questions.

Becoming a YAC member means that you want more of an influence on the Botball community. If someone feels like he or she could make a difference in the Botball community, then they should consider applying for the Council. On top of being a member of the Council there are also leadership positions within the YAC. The Council has two Vice Presidents, each leading a team of five members, and a President who oversees both of those teams. The two Vice President positions are Vice President of Communications and Vice President of Public Relations, the former dealing with any technical information and the latter dealing with the Global Conference and publicity. I myself sought to be more of a leader and applied for the YAC in the summer of 2008, becoming its Vice President of Communications in its inaugural year. In my second year I was elected President of the Council.

8 Conclusion

In summary, all teams need a good leader. This is especially true in difficulties and situations that arise in Botball. Additionally, each team needs a competent mentor who communicates and works well with the team leader. A leader must structure his or her team to use each of the team members' skills efficiently and effectively. As each team member completes his task, proper motivation is needed for further success in the future. A leader should not only flourish in his or her own team, but also strive to help improve all teams in the spirit of Botball. A leader on a Botball team should continue to lead as he or she continues in his or her career in the future.

References

[1] Merriam-Webster Online: http://www.merriam-webster.com/dictionary/lead

[2] Facebook:
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