How does digitalization tool help athlete/coach relationship in athlete-centred coaching environment in floorball

Ralfs Orste

Haaga-Helia University of Applied Sciences
Sports Coaching and Management
Report type
2022

Abstract

Author(s) Ralfs Orste
Degree Sports Coaching and Management
Thesis Title How does digitalization tool help athlete/coach relationship in athlete-centred coaching environment in floorball
Number of pages and appendix pages 29 + 16

The relationship between a coach and an athlete can greatly affect a sports team's performance in important competitions or games. To improve relationships, nowadays coaches are making more use of the athlete-centred coaching approach, which can improve a team's overall performance by communicating with players and getting to know their personalities. To be highly successful in sports, all the players on the team must strive for the same goal and are motivated to become better athletes, so getting to know the personalities of the players can be a very important part of it.

Digitalization in sports has increased in the past years and gained more usage every year. Broadcasting and live results have changed with the use of different camera angles and sensors. Also, different digitalization tools have been used in sports to determine physical abilities, fatigue, and physiological needs.

Athlete-centred coaching and digitalization tools have increased in floorball often. In Latvia, some floorball teams are still lacking communication between the coach and the athlete because not all of the teams have been educated that it can improve the overall team performance. The author believes that this thesis results can provide more information about the athlete/coach relationship on why it could be helpful for floorball teams to perform better results in the future.

The digitalization tool was used to determine whether it helps athlete/coach relationships in floorball, for instance, the CoachTools platform for athletes and coaches. CoachTools is an athlete-centred coaching platform that helps clubs and teams to reach their goals. All coaching tools from planning to caring in one platform – an easy way to manage, organize, and coach teams more effectively with the use of CoachTools.

Key words
Coach-athlete relationship, digitalization tool, floorball

Table of Contents

1   Introduction

In sports, athletes will develop many interpersonal relationships on and off the field. Those relationships may include their coaches, teammates, agents, sports psychology consultants, medical staff, parents, siblings, other family members, and friends. From all of those relationships that athletes may develop, athletes' relationships with the coach can have the greatest impact in training sessions, competitions, and other aspects of their private lives. (Coakley 1986, 1990)

Building relationships in sports can be a complicated process, it requires communication, understanding, and an open mind for both, coaches and athletes. Coaches who regularly use compassion, truthfulness, shared decision making, and caring behaviours receive positive feedback from athletes about increased trust and satisfaction with other teammates and coaching staff. Increased trust between coach and athlete improves cohesion, team efficiency, performance, and overall commitment to the team. (Gilbert 2016, 100)

Becoming an effective coach can take a long time and it can be a daunting task, but it is all about the first step you need to take as a coach. One of the first steps for every coach to start building a successful team is to create an effective practice environment. When an effective practice environment is created in the team, athletes can gain more knowledge, improve their learning experience and improve their skills. (Jones & Kingston 2013, 31-32)

Coaches need to be willing to share a piece of meaningful information with athletes for relationship building to work. Both athletes and coaches must have the courage to be vulnerable because then each of them will be able to open up fully. (Gilbert 2016, 78)

Giving feedback to athletes is a part of coaching, the information can be very useful for improving teams' performance when coaches are giving it to athletes or when athletes give feedback if something can be improved in the training process. The information gained from feedback can provide athletes with more knowledge about their performance and what can be improved to become better athletes. (Jones & Kingston 2013, 37-40)

During the early stages of learning, athletes might not use feedback efficiently because of their inexperience in learning from mistakes. For coaches, it is important to teach athletes how to perceive and then use the feedback more productive. Also, making sure what type of feedback can be the most useful for each individual is necessary. As well as the frequency of specific feedback and timing of it can be beneficial. (Jones & Kingston 2013, 37-39)

The development of digital technology has enabled different brands, companies and other stakeholders to unite with sports organizations and their fans to benefit from both sides. Increased

data mining on digital platforms has helped to better understand fan support, feelings and ambitions in a different way. Many sports organizations have successfully taken advantage of this new opportunity to increase the number of fans and the popularity of the organization by using their sponsors to increase sales for both the organization and the sponsors. (Segovia & Kennett 2021, 8)

The purpose of this study is to help other floorball coaches to improve the coach-athlete relationship and strengthen the athlete-centred coaching environment. It is sometimes more difficult for coaches to communicate with some players who do not feel comfortable communicating face to face or are introverted. Therefore, using this digitalization tool, it is possible to communicate through this platform and gather information from the athlete's responses to the feedback. Athletes can feel more comfortable by just writing their thoughts in the feedback system rather than having verbal conversations. By using this platform coaches can save some precious time gathering information and athletes can be heard more often.

In this research, the study group will be the Latvian highest leagues Men's floorball team from Kekava. This is a semi-professional team that is aiming to become a Top-4 team in the league. In recent years this goal has not been so successful, that is why the team is ready to use different training techniques by using the CoachTools digitalization tool. By using CoachTools, the team will be able to determine whether this platform can be useful to improve the coach-athlete relationship and achieve their goals.

CoachTools is the digital platform that helps coaches to develop and improve an athlete-centred coaching environment. Different coaching tools in one platform that helps plan and support athletes. CoachTools is easy to manage, organise and coach teams with more efficiency. The main benefits of using CoachTools are that coaches can plan training, follow athletes' progress, analyze collected data, motivate players and improve athletes' performance. (CoachTools s. a.)

One of the research problems is that there are no studies about how digitalization tools can help improve coaching in floorball, so the author believes that writing this thesis can help other coaches to see that the use of digitalization tools can help teams to achieve more. It would be very useful if there would be research that shows digitalization tool usage for a longer period. When athletes use or do some things for a longer period, they might get used to them and would not see the point of doing them. To keep athletes motivated all the time is hard and if they do not benefit from the coach's approach or it is always the same then the whole team can suffer from that.

2   Athlete-centered coaching

At the beginning of the coaching job, each coach should determine their own coaching philosophy. By determining coaching philosophy, coaches can define the outcomes of the competitions and their coaching methods. Also, one of the main things coaches should take into consideration is the team's athletes and their abilities. The athletes are the ones that are running the sport, so coaches should have an athlete-centred approach. This approach gives athletes the ability to be a part of the decision making and shared learning process. A coach should develop athletes and increase the quality of the training environment. (Kidman & Hanrahan 2011, 16)

An athlete-centred approach is described as when coaches can provide athletes with tools that can help them in the learning process to develop knowledge and skills on how to learn, make decisions and solve problems by themselves. Athletes develop their skills better when they are a part of problem-solving that can maximize their performance, decision making and even knowledge of the game. A shared approach to learning among coaches and athletes can be the deciding factor between success and failure. (Kidman 2005, 13)

One of the first things that an athlete-centred coach should do is to understand each athlete's reason for participation and clear vision for both, coach and athlete, to have a mutual direction of where they want to end up by the of the season (Kidman 2005, 14).

The coaching process can be a tough challenge for some coaches, but it gets even harder when you feel that you cannot provide new knowledge to the athletes. At that moment it is wise to listen to your athletes and hear what they have to say. Athletes can give your more information about themselves and with this information, you can find new challenges for them by encouraging them to take risks. (Coe, Zehnder & Kinlaw 2007, 37)

2.1   Defining an athlete-centred approach

The use of an athlete-centred approach to coaching provides athletes with more motivation to learn, better knowledge of tactics and different sets of skills and a better understanding of why such training is necessary. This approach allows athletes to make their own decisions that can benefit their individual growth and performance, while also supporting athletes to become more self-aware and self-sufficient. (Kidman 2005, 17)

A lot of coaches have mentioned that gaining trust and respect from athletes can play a major role in a successful team environment. The trust between coach and athlete must be mutual but it mostly depends on the coach to establish that kind of status. Coaches need to trust athletes to follow the team's goals and be determined to follow their performance goals. In turn, athletes are

responsible for their performance and learning, and for the team to establish a supportive team environment. While also keeping in mind that athletes need to trust their coaches that they will make decisions and suggestions in the best interest of the team. Using an athlete-centred approach will improve the development of mutual trust and respect between coaches and athletes. (Kidman 2005, 17)

Using this approach, the goals are mutual and teamwork is built with a commitment to move towards more successful results. Coaching staff need to help athletes to understand how to reach their full potential by learning from previous mistakes un successes. It is suggested that when coaches guide athletes towards self-reliance by using decision-making methods, athletes are more likely to take responsibility for sports participation. Also, a coach's job is to provide the individual not only with knowledge of the sport but also with the outside life. (Kidman 2005, 17-18)

2.2 Key components of the athlete-centred approach

The term athlete-centred is also similar to the empowerment term that is defined and discussed in the context of sports. A part of an athlete-centred approach that coaches use in practices includes three main components: Teaching Games for Understanding, questioning, and building a quality team culture. In addition, other coaches have mentioned some other aspects that can improve athletes' performance and responsibility for actions. (Kidman 2005, 13)

2.2.1 Teaching Games for Understanding

Teaching Games for Understanding (TGfU) is a games approach that is used for athletes to learn a specific skill, tactical understanding and technique. This component is used to make athletes solve problems posed by the game and respond to different decision-making situations the game is providing. It also shows the athlete's ability to understand the rules, strategy, and tactics of the ongoing game. By using the TGfU model, coaches can see how athletes are applying their game sense to learn more about the game. (Kidman 2005, 18)

Athletes can learn more effectively when coaches do not tell them what to do and where to go, it forces athletes to use more game sense that provides them with more productive learning. This under pressure environment compels athletes to apply a different set of skills and techniques for the game that can only benefit their growth. That is why the TGfU approach focuses on game-like situations that help athletes to improve their decision-making process. (Kidman 2005, 18-19)

For coaches, it is necessary to design and plan the games so that they can meet learning outcomes and is developing athletes' overall attributes. TGfU also supports that enjoyment is used in the process but it does not mean that it cannot be competitive. This approach fits well into an

athlete-centred philosophy because it makes athletes solve problems through games which can benefit their growth. When challenges are offered to athletes then they also increase their effort to be successful. (Kidman 2005, 19)

2.2.2 Questioning

For athletes, the best way to develop thinking and decision making is questioning, this technique helps athletes to learn better problem-solving. The most effective way of questioning is by asking purposeful questions so that it encourages athletes to respond. It also inspires athletes to be more motivated and concentrated in the process which transfers to the games where the pressure is higher. (Kidman 2005, 19)

Coaches must listen to what their athletes have to say about each question because then coaches can understand the athletes better and design questions that will generate high-level thinking from athletes and give them ownership of their learning. For coaches to create the best questions for athletes, they need to have a great understanding of the game, their athletes and the context of the solution. (Kidman 2005, 20)

When athletes are problem-solving by themselves, it empowers them, gives them more self-awareness, and increases their effort in the opportunity. This technique helps athletes in the long-term learning when athletes have been enabled to remember, understand and apply their skills in a specific moment of the game and the coach does not need to question the athlete. That is when a coach understands how much his or her questioning has helped the athlete to reach high-level thinking and learning. (Kidman 2005, 20)

2.2.3 Team culture

Team culture is defined as an ability to bring individuals together in the chase of a mutual goal and success. One of the key things for creating a quality team is establishing a direction for the team that all organization is going to follow. Without a quality team culture, it will be difficult for coaches to bring athletes together, improve their learning, and even build a winning environment in the team. (Kidman 2005, 20-21)

A lot of coaches share that the vision and values in the team should either be mutually created or use an existing vision and values, but coaches must make sure that athletes buy into it. Forming values in the team is a very important part of team culture because it creates the backbone of the team's actions and when values are broken then it can critically affect the whole team. Commitment and communication are usually the main values for athletes and coaches because these values are very critical for further success. But it is also important that the team understands

the meaning of each value and trusts that this value can be beneficial in the future of this team. (Kidman 2005, 21)

The spirit of the team is another important part of creating a team culture. When a team has a good team spirit, all athletes work together as one, bring positiveness to the team, respect and trust each other, and support and care for others. Also, it is notable that each team is unique and if something works for one team does not mean it will for other teams. An athlete-centred coach will take uniqueness into account and understand each environment needs to develop the best possible team culture. (Kidman 2005, 21-22)

2.2.4 Other aspects

An athlete-centred approach encourages athletes to take responsibility for their actions and contributions to the team, and that is one of the biggest reasons why it is widely used nowadays. Athletes' responsibilities not only include problem-solving but also benefit in other areas that can help the team. (Kidman 2005, 22)

Some coaches like to create mini-groups where each group has their own responsibilities that can benefit the team. This usage of mini-groups gives each team member an opportunity and responsibility to be a leader for some aspect of the team. It allows athletes to take more ownership of the team and team's culture while also contributing to athletes' play on and off the field. (Kidman 2005, 22)

Coaches should take into consideration what is the best possible solution for a team when speaking of the captain role of the team. Some coaches mention that shared leadership can bring many benefits for the team like gaining athlete input to maintain team chemistry, maintaining motivation and setting higher standards, better team mentality, and better responsibility of team values and expectations. While if a team has only one captain then the whole responsibility falls on one person's shoulders and it can affect the team environment if the captain does not do some task. A coach assesses the team's needs and capabilities to make the best solution for a leadership group. (Kidman 2005, 22-23)

Role rotation can be one of the key aspects in developing decision making in athletes. For role rotation to work, trust is very important in the team so that other athletes believe that each athlete can contribute to the team's success. Also, from a coaching standpoint should be allowed to play in various positions to improve their skills, decision making, self-awareness, and tactical awareness of teammates. It gives athletes the knowledge of the tactics in different positions and improves their understanding of the game. (Kidman 2005, 23)

2.3 Building commitment

Commitment plays a major role in sports. You can clearly distinguish people who are committed by their work ethic and their unwillingness to give up when there are obstacles on the way. Committed people in organizations are connected to the organization's values and goals that are set beforehand and are determined to achieve them. Those people believe what they are doing and why they are doing it. It is very hard to use committed people in an organization whose goals are vague and uncertain. (Coe & al. 2007, 12)

Figure 1 shows four important conditions that contribute to the development of commitment for athletes. (Coe & al. 2007, 13)
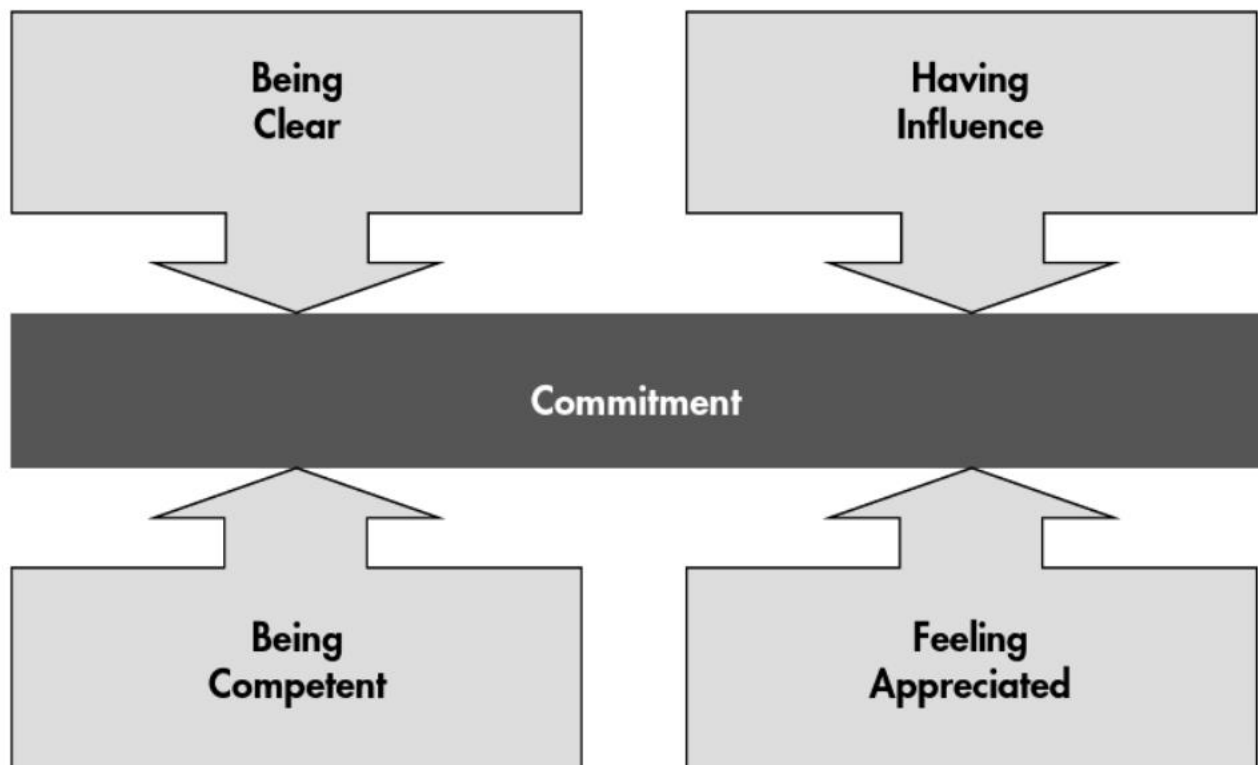

Figure 1. Four Critical Conditions for Building Commitment (adapted from Coe & al. 2007, 14)

2.3.1 Being Clear

According to Coe, Zehnder and Kinlaw (2007, 13), a suggested fundamental condition for building the commitment to people in any organization is that they are clear about the organization's foundation or core values and its primary goals.

When values, goals and vision are communicated in the organization, it gives people the basis for making decisions to become more successful with the organization. It also helps people to resolve unnecessary conflicts that might come up if things are not clear and people can focus more on their priorities. (Coe & al. 2007, 14)

Team members often present their expectations with determination and vitality, but when priorities are being changed it can affect teams' performance and create many problems along the way. When priorities are being changed, teams must resolve new problems, make hard decisions and understand what will be the strategy for it. If during this change the team is not able to move closer to achieving the goals, then they might suffer an unmotivated, discouraged, and unwilling environment from athletes, and they will start to feel that they are just wasting their time, and energy, and become frustrated. (Coe & al. 2007, 14-15)

2.3.2   Having Influence

Every organization has countless opportunities to improve and encourage others to become better persons and athletes. But it is not that easy to influence the team's performance and individual athletes' performance, so they have to use their knowledge and skills to explore and analyze different problems that might come along the way. By influencing the team athletes will more likely be willing to improve their work ethic and their relationships with others. (Coe & al. 2007, 15)

Coe & al. (2007, 16) suggested that the person being coached should be rather told *what* to do or *how* to do some specific thing, but not both.

By telling people *what* and *how* to do something, you take away creativity and they are doing more of what you have said to them, but not reacting according to the situation. When you tell people only *what* to do, they will use more creativity and an open mind to understand how it should be done. If you only tell people *how* it should be done, are you ready to sacrifice what they came up with? (Coe & al. 2007, 16)

Coe & al. (2007, 28) also mentioned that when coaches are not using *what* and *how* they are entering the real world of coaching.

When coaches are not providing any more answers and solutions to the person being coached, they start to just collect answers and get the satisfaction of making others the experts. That is

when you become a successful coach when you do not need to fix everything yourself, but you have coached others to do that themselves. (Coe & al. 2007, 28)

"Coaching helps people gain new insight, which in turn helps them to discover new opportunities to exert influence over their jobs and their lives" (Coe & al. 2007, 16).

With disciplined coaching, it is possible to help others understand their own needs, set career goals, and even to improve their performance. Coaches' influence can play a major role in any athlete's pathway. (Coe & al. 2007, 17)

2.3.3 Being Competent

It is in people's nature to avoid tasks that they think they cannot do or will fail to do it. When building competency in others, you must ensure that you are giving them the necessary tools, resources, and knowledge, so that they can perform at their best and that have the willingness to succeed in their jobs. (Coe & al. 2007, 17)

Coaching often helps people to find confidence in themselves and by well-planned coaching, it is possible to teach others new knowledge and skills that they need to do their best. Knowledge and skill are learned through the training process, but coaching also supports individualized learning to help people to take the necessary steps to learn more outside of the training process. (Coe & al. 2007, 17)

Coaching has its way to give support to people, but it is essential to guide others the right way with professional and successful learning that builds confidence in people. Confident people can be competent and successful. (Coe & al. 2007, 18)

2.3.4 Feeling Appreciated

Personal appreciation is one of many things that successful coaches should accomplish during their careers. During your coaching, you will have many conversations with the person you are coaching and it is crucial that you acknowledge and celebrate their success, not just because you should have said it, but because you did it from a larger perspective and you care. When people being coached feel support from coaches, they start to feel more appreciated and they will start to value coaches' opinions, understand their role, and will be more committed to the team. Successful coaches use all the tools to reach their full potential and use all the strengths of the person being coached. (Coe & al. 2007, 20)

3   Athlete/coach relationship

Coaches play a significant role in sports, and they have a tremendous effect on athletes' overall physical and psychological performance. It is the most important role for teams and athletes to be successful. To achieve the highest goals coaches must ensure that they are bringing the best performance from the athletes, that is why it is crucial to have good communication between the coach and athlete. Effective and efficient communication between coach and athlete is believed to have a great impact on athletes' performance improvement and team cohesiveness. (Choi, Jeong & Kim 2020)

With mutual trust, athletes feel free to expose their fears, weaknesses, vulnerabilities, and needs to coaches and also other teammates. By trusting their coaches' athletes can bring their focus on getting better and helping their team to reach team goals without having any negative thoughts or worries about coaches' decisions or actions. (Gilbert 2016, 73)

It is crucial to remember that when an athlete has shared important and intimate information, it will not be passed on and will remain between the coach and the athlete. This is a very important part of building a cohesive team because trust is not easy to gain. Even the best coaches and athletes are vulnerable, but to achieve their peak performances, every single one had to feel comfortable exposing and sharing their vulnerabilities, so that each of them can bring out the best possible versions of each other and overcome challenges. (Gilbert 2016, 73)

Coaches should not underestimate the amount of time and effort that is needed to build a strong foundation of trusting relationships with athletes. For high-performing teams trust is one of the main assets for building team cohesion and improving team performance. (Gilbert 2016, 74)

Mageau's and Vellerand's (2003, 899) research shows that autonomy-supportive behaviours have a beneficial impact on athletes' intrinsic and self-determined extrinsic motivation, which are important determinants of performance and persistence.

Athletes with intrinsic and extrinsic motivation are an integral part of a team that wants to strive for higher goals. Athletes with intrinsic motivation need to be supported more often and receive more communication so that athletes do not lose their pleasure and satisfaction in sport. Meanwhile, athletes with extrinsic motivation need to find external outcomes for their self-determined motivation. Coaches need to be aware of each athlete's motivation and find out what are the techniques for each athlete to bring out the best in them. (Mageau & Vallerand 2003, 899)

3.1   3+1C conceptualisation

Jowett proposed the 3+1C conceptualisation of the coach-athlete relationship. This conceptualisation consists of four key constructs: closeness (i.e., interpersonal feelings), commitment (i.e., interpersonal cognitions), complementary (i.e., interpersonal behaviours), and co-orientation (i.e., perceptually interconnected). (Hanton & Mellalieu 2012, 222)

Closeness is defined as the emotional connection between the coach and the athlete. Mutual respect and trust are also characterised as closeness in relationships. When a coach or an athlete is lacking trust and respect it can affect performance and break the bond between them. A positive attitude from a coach can improve closeness in the team environment with positive words to athletes, praise or just a simple fist bump. (Hanton & Mellalieu 2012, 222)

Commitment is defined as the cognitive component of the coach-athlete relationship. This component relates to athletes that want to continue relationships with the team for the present and future. Committed athletes are more likely to be motivated to invest time and energy to become better athletes but those with a lack of commitment are more likely without motivation and maybe already considering terminating the relationship. (Hanton & Mellalieu 2012, 222)

 Complementarity is defined cooperative component of the coach-athlete relationship. This cooperation and corresponding behaviours capture coaches' and athletes' shared efforts to achieve targeted outcomes, better preparedness, and more open conversations. Coaches are interested in hearing athletes' thoughts or feedback about competitions, previous training, athletes' performance, and even upcoming goals. Athletes with a lack of complementarity are more likely to arrive late for training, have a more aggressive opinion, and be unable to adapt to a more complex situation. (Hanton & Mellalieu 2012, 222)

The +1 in the 3+1Cs coach-athlete relationship framework refers to *co-orientation*, where coaches and athletes agree with the situation. Co-oriented coaches and athletes are more likely to be on the same page and understand their relationship. Lack of co-orientation is described when one person's views on the relationship do not match the other person's views on the relationship. (Gilbert 2016, 77-78)

3.2   Feedback

Giving feedback to athletes is a part of coaching, the information can be very useful for improving teams' performance when coaches are giving it to athletes or vice versa. The information gained from feedback can provide athletes with more knowledge of their performance and what can be improved. Different type of feedback is used in coaching. Augmented feedback is information that is given to athletes and is provided from an external source. It can be provided immediately, during

practice, or after practice. It depends on individual and assigned tasks when coaches should consider using augmented feedback and what form of it. One of the most commonly used forms of augmented feedback is verbal feedback. By giving verbal feedback coaches can instantly correct some mistakes from athletes and provide them with better solutions. For some athletes it might not be as efficient, so coaches might consider using video feedback or biofeedback. These types of feedback can give athletes more specific information on their individual or physical abilities. (Jones & Kingston 2013, 37-40)

3.2.1 Attentional focus

For the practice environment to be successful, coaches need to guide athletes in the right direction, so that they can achieve their goals. Coaches should direct athletes' attention toward the required movements and skills of a specific sport. When athletes bring their focus on particular things, they can significantly improve their performance. If athletes have their focus on some movements or skills in practice, then after a while they master them so well that they will execute them automatically and they will perform more efficiently. It is also notable to coaches that some athletes might have a negative or stressful effect while learning some skill. Coaches should be aware of that and guide them to focus on different learning ways. Focusing on the previous success they had can help them understand what things they need to do to repeat that success. It also might come in handy for athletes to make goals that allow them to shift their focus on their specific roles on the team. (Jones & Kingston 2013, 40-43)

4 Digitalization in sports

Digital technology is being used more and more often every year, at work, at school, in sports and in everyday life. The development of digitalization has affected overall communication through online platforms in such a way that online communication is now more valuable than it was several years ago. Nowadays, mobile devices have transformed into computer types of devices that can be held by hand or used as wearable technology and they are used often in everyday life. (Miah 2017, 5-6)

The development of digital technology has enabled different brands, companies and other stakeholders to unite with sports organizations and their fans to benefit from both sides. Increased data mining on digital platforms has helped to better understand fan support, feelings and ambitions in a different way. Many sports organizations have successfully taken advantage of this new opportunity to increase the number of fans and the popularity of the organization by using their sponsors to increase sales for both the organization and the sponsors. (Segovia & Kennett 2021, 8)

4.1 Components of sports digitalization

Sports have four different institutionalized components that are associated with sports, those include organizational, technological, symbolic, and educational (Xiao & al. 2017, 4).

The organizational component covers the sports organizations' roles such as teams, coaches, sponsorship, organization's government, trainers, and even medical staff. Organizational activities mostly include business activities that are chosen by the organization's set outcomes. The use of digital technologies has enabled organizations to expand their recognition through websites, mobile applications, and social media. New capabilities are shown also from stakeholders like software developers, data analysts, and data providers that are addressed to the digital technologies. A lot of administrative functions have been developed, starting with player registrations to managing tournament results and even creating real time access to game results. Digital technologies allow sports organizations to interact with their own team members and also other stakeholders. Lastly, digitalization has helped e-Sports to gain popularity and become competitive, although it is still debatable if e-Sports should be considered traditional sports. (Xiao & al. 2017, 4-9)

The technological component usually includes the material equipment, skills and knowledge, physical skills, and other indirect producers. An increase in the technological component creates a competitive advantage for organizations by using digital technologies. Nowadays, the development

of technologies has provided organizations with different sensors, wearable devices and analytical tools that can also be accessible and traceable to the public. By the use of sensor data information coaches and athletes can evaluate and analyze performance to prepare for future events. From the technological point of view, the popularity of e-Sports has contributed because games can be attributed to their simulation of the real world and duplicated to real players' skills and attributes. (Xiao & al. 2017, 4-10)

The symbolic component of sports emphasizes secrets related to game strategies, rituals, sports consumers, and other technical aspects. The display of the sports has been implemented through online platforms and giving new opportunities for sports organizations to improve performance through replays of various camera angles. It has also enabled to broadcast of live streaming of sports events for sports fans and even shows the athletes' analysis. (Xiao & al. 2017, 5-11)

The educational component of sports contains the obtained skills and knowledge through formal instructions. The educational component and the technological component are closely connected which is often gained through the form of training. It applies to coaching staff, managers, referees, and players. The increase of data analytics usage in training demands a new set of skills for sports producers and challenges their way of coaching. Sports producers need to use technology to their advantage, otherwise collected data analytics are not relevant. (Xiao & al. 2017, 5-12)

4.2   CoachTools

Sport coaching has also gained some benefits from the development of technologies. Different kinds of digital technologies like: video recording, location tracking, sensors, social media, and web-based applications have helped sports coaching to analyse athletes' performance and provide feedback. Before using any digital technology, coaches should understand what and how digital technology can help them to improve performance. (Nash 2014, 259-260)

CoachTools is SaaS coaching platform software with all necessary coaching tools in one place from planning to caring. Developers' philosophy from the beginning has been to build easy to use platforms from hobby teams to elite sports. CoachTools company was founded in 2017 and has been increasing its popularity ever since. So far, the majority of customers are large Finnish clubs, but the company also has international customers, mostly in Europe. CoachTools is also available in seven different languages: Finnish, English, German, Latvian, Spanish, Italian, Swedish, and Slovak. (CoachTools s. a.)

CoachTools is an athlete-centred coaching platform that provides clubs and teams with an easier way to reach their goals. Different coaching tools in one platform that helps plan and support athletes. CoachTools is easy to manage, organise and coach teams with more efficiency. The

main benefits of using CoachTools are that coaches can plan training, follow athletes' progress, analyze collected data, motivate players and improve athletes' performance. (CoachTools s. a.)

CoachTools' slogan is Plan, Care and Succeed. Each of these words covers some part of the CoachTools program qualities and why they are necessary (CoachTools s. a.).

The plan covers practice planning with efficiency. In this platform, coaches can make their templates of practices and then share those practice plans with the team or the whole club. Coaches can use the practice library where you can save some practice drills for your team with videos or photos, or even use some of CoachTool's pre-made drills and exercises. With the new content, you can even draw drills and tactics or edit videos by drawing on them to share those clips with the athletes. (CoachTools s. a.)

Care covers better interaction with athletes. After every practice or game players submit their feedback about the event and the coach can listen better to the athletes, and understand their moods and expectations. Also, when the feedback is submitted, an athlete needs to rate their exertion after the event, so the coach can collect the data on athletes' load and understand if they need more recovery. Coaches can share and discuss videos with athletes to ensure faster learning. (CoachTools s. a.)

Succeed covers athletes' progress. Athletes can set short- and long-term goals with coaches that can be visible daily. Coaches can organise their work by seeing how many participants will attend and plan better training. Coaches can keep test results in the system and they can be stored in one place, so they are always available. By collecting data coaches can make better decisions based on data and feedback from athletes. (CoachTools s. a.)

In sports, it is common, that coaches and head of coaches in clubs' offices to waste a lot of time and it is hard to deliver quality. So CoachTools bring value and help coaches, athletes, clubs and federations to ease their daily work, so they can save a lot of time, improve quality, manage data, and move closer to their main goals. (CoachTools s. a.)

CoachTools' purpose is to help the clubs build more valuable environments through sports and everyday life to be supportive on the road to success. CoachTools' main goal is to be the world's leading coaching platform by the end of the decade. (Starthub s. a.)

5   Floorball

Floorball is an exciting and quickly developing sport. Floorball was first founded in Sweden and since then it has spread all over the world. Nowadays it is played in over 80 countries of which 75 are members of the International Floorball Federation (IFF). Northern Europe, Switzerland, and the Czech Republic have the largest number of players, but the floorball is also played in other European countries, Asia, Australia, North America, South America, and Africa, and is still spreading to new countries. (International Floorball Federation s.a.)

Floorball is played indoors on a rink with an official size of 20 meters wide and 40 meters long. The rink is surrounded by 50 centimetres high boards with curved corners. Matches are played in three twenty-minute periods between two teams. If the game is tied after regular time, five minutes of overtime is played, but if it is still tied after that, the game goes to a shootout. Each team has six players, including a goalkeeper and the team can consist of 15-20 players total. Players play with special floorball sticks that are made from carbon composite materials. Besides sticks, players do not need specific equipment, just a pair of shorts, a shirt, socks, and indoor sports shoes. The goalkeepers have their equipment - padded pants, a padded chest protector, knee pads, a goalie uniform, and a helmet. Goalkeepers do not use sticks and may use their hands to play the ball, but only if they are inside the goalkeeper area. The game is played with a plastic precision-type ball, which has 26 holes in it. In floorball, it is not allowed to use rough body contacts, but since the sport has grown and players have become better and stronger, the floorball has become a more physical sport. (Pasanen & al., 2007)

Floorball has been played since the mid-70s, which was developed in Sweden. The roots of floorball come from all over the world because similar types of games have been played throughout the 19th century. For example, some roots come from North America and England where from ice hockey was introduced as the sport of floorhockey, but in Australia known sport of field hockey turned into indoorhockey. Floorball was created from many different sports games and the first official national Floorball federation was established in Sala, Sweden. In September 1983, in the first steps of becoming an organized sport, the first official floorball rulebook was created. Looking back at the very first steps of floorball, the game has changed so much and has been developing every year. Some rules have even changed because it has been growing so fast and athletes have become more skilled and teams have used more tactical strategies in games. (Oksanen & Peltomäki s.a.)

6   The aims and research questions

This thesis aims to prove that digitalization tools can help coaches improve communication with floorball athletes. Nowadays, digitalization tools have become more and more popular, and also floorball teams have started to use them. Northern European countries like Finland and Sweden are slowly improving to make floorball a professional sport by planning ahead, making goals, analysing progress, and taking care of athletes' needs. Switzerland and the Czech Republic are two other countries that are climbing their way up to a more professional sport but those are just a few countries that are playing at the highest level. Floorball needs more competitive floorball leagues and countries to become even more popular and qualify for the Olympics as a sport.

Floorball in Latvia has improved over the years and definitely players and coaches are getting better. But by far, the biggest obstacle for the Latvian floorball has been reaching Top-4 in the World Championships. In the past years Latvian National floorball team has been very close to reaching the Top-4 position in World Championships, but every time the dream has been crushed in the Quarter-finals. Even though the Latvian team has lost in the Quarter-finals, the team has been able to perform well in the last games and earn the 5th place in World Championships most of the years, except the year 2016 when the team had tough Championships and earned the 10th place. So, the main focus for the Latvian floorball should be to improve the playing level in the local league and improve clubs in general. If the level of the game improves in the local league then the chances of advancing to the Semi-finals will be better.

Coaching is not always easy and a digitalization tool platform like CoachTools can definitely make coaching easier. Instead of the coach going to talk to the athlete after every practice or competition, using the CoachTools platform, the coach can see after each practice or competition how each athlete feels, how was the team spirit, and the player can comment on the event that took place. Using this type of feedback can ease coaches' jobs and save some time to collect information.

The author believes that this thesis results can provide more information to coaches on why using digitalization tools would be helpful for floorball coaches to perform better results in the future. The author wants that in the future floorball can be a professional sport and will be in the Olympics. For that to happen floorball needs to increase its competitiveness in the World Championships and also have a higher level in other floorball leagues. Of course, it will not happen in the next few years, but if coaches can improve their practice quality and effectiveness then it might happen at some point. And hopefully, CoachTools can help other coaches around the world to make that one step forward for floorball.

6.1 Research questions

- What kind of difference is between using digitalization tools and verbal communication as feedback after practices or competitions?

- Can digitalization tools help to improve the coach-athlete relationship?

- Can using a digitalization tool help improve athletes' performance by collecting feedback after every training?

- What kind of difference can CoachTools make in the coaching process in floorball?

7   Research methods

This research included different kinds of sources and methods that were used. At first, a questionnaire was used to collect data for the study. The data was collected through a different set of questionnaires and was analysed with a statistical method. This kind of method was used because it was easier for the target group to provide their answers using a measurement system and then implementing collected answers to charts that showed more precise results.

7.1   The target group

The target group of the study was the Latvian highest leagues Men's floorball team from Kekava. This is a semi-professional floorball team that is aiming to become a Top-4 team in the league. In the last three seasons, the team has made good improvements from being one of the bottom teams in the league to being a contending team. Kekava's floorball team is still very young, but the core of the team has not changed much in these developing years. By participating in this research, the team is hoping that it can help them to improve their overall team performance.

This target group was selected because the author believes that Kekava's floorball team has the potential to become one of the best teams in the league in a few years. The team has shown their grit and dedication in the past years, so participating in this research can help them to improve even more. In the last two years, the team had the same coach and also this season the same coach continued coaching the team, so after the season athletes will be able to compare how it changed the training process and communication in general.

Twenty-three (N=23) male floorball players participated in a season-long process where players used the CoachTools platform in their training process. Athletes did not use any digitalization tool before this year in their training process. Also, two (N=2) floorball coaches participated in this season-long process using CoachTools as part of their training process planning, collecting feedback, and collecting athlete data.

After the season data were collected through two different questionnaires for the athletes and two different questionnaires for the coaches. Both coaches and athletes answered twelve questions in each questionnaire with a measurement system (0-10) to determine their coach-athlete relationship. In the first questionnaire coaches and athletes referred to their relationship before using the CoachTools digitalization tool. And in the second questionnaire coaches and athletes referred to their relationship after using CoachTools feedback after every practice in their training process. The team used CoachTools three times a week after every practice by submitting their

feedback. After collecting data from all questionnaires, charts were used to determine whether digitalization tools help improve the coach-athlete relationships or not.

8 Results

The result of different questionnaires showed how the digitalization tool helped to improve the coach-athlete relationship in a floorball team. Respondents used the digitalization tool for a full season to understand the difference in using it. Athletes used CoachTools three times a week after every practice by submitting their feedback about the practice. After the season ended, respondents did a questionnaire about the coach-athlete relationship before using the digitalization tool and then did a questionnaire about their coach-athlete relationship after using the digitalization tool.

Questions 2-5 were made about relationships, trust, and communication with the coaching staff (see Chapter 2), questions 6-9 were made about the 3+1C conceptualisation concept (see Chapter 2.1), and questions 10-13 were made about commitment (see Chapter 3.2). CoachTools platform was used as a digitalization tool. Results will be explained in the next sub-chapters.

8.1 The impact of digitalization tools on athletes

The results show an increase in an overall coach-athlete relationship after CoachTools was used versus before CoachTools was used from the athlete's point of view (see Figure 2 and Figure 3). Athletes responded in the questionnaire that almost all things got better when CoachTools was introduced.

Athletes responded that their relationship with their coach increased from a 6.6 obtained score to a 7.6 obtained score after using CoachTools. Even though, the coach-athlete relationship increased after using CoachTools 7.6 obtained score still might not be enough to achieve their highest goals. Athletes' trust increased by 0.3 obtained score while communication with coach got better by 0.6 obtained score. But athletes felt way more motivated after using CoachTools with a 0.8 increase in obtained scores.

In the second part of the questionnaire, athletes responded that their commitment to the coach improved by a 0.5 obtained score and respect only by a 0.2 obtained score. Athletes responded that coaches listened to their opinion more often after using CoachTools and felt better with how coaches talked to them (see Figure 2 and Figure 3).

Athletes responded in the questionnaire that the coaching staff was more clear with their instructions which saw an increase from a 6.6 obtained score to a 7.6 obtained score. Athletes also responded that they felt more appreciated by 0.8 obtained score and support from coaches increased by 0.8 obtained score. While athletes' confidence did not change at all as it stayed at the 8.4 obtained score.

Results showed that athletes felt the difference when CoachTools was introduced to them. After using CoachTools athletes obtained scores in the questionnaire increased.

Figure 2. Coach-athlete relationship before using CoachTools (Athlete version).
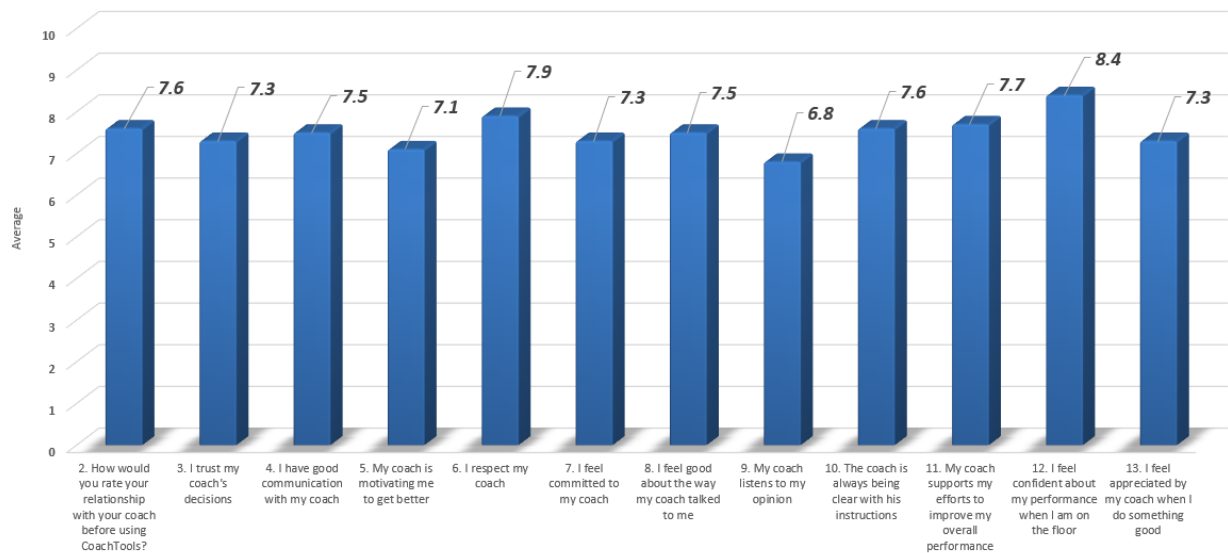
Figure 3. Coach-athlete relationship after using CoachTools (Athlete version).

8.2 The impact of digitalization tools on coaches

Figure 2 shows coaches' responses to the questionnaire before using CoachTools and Figure 3 shows responses after using CoachTools. After CoachTools was introduced to the team, coaches' responses showed that they also felt an increase in their relationship with athletes but not as much as athletes felt.

Coaches responded that their relationship with athletes increased from an 8.5 obtained score to a 9.5 obtained score. Although, their trust in athletes did not change and stayed at a 9.0 obtained score. Coaches' communication with athletes increased from an 8.5 obtained score to a 9.5 obtained score while motivating athletes to get better decreased from a 9.5 obtained score to an 8.5 obtained score.

Coaches' respect for athletes dropped by a 1.0 obtained score after using CoachTools. Coaches responded that their commitment and appropriate communication got way better than it was before using CoachTools. But coaches listening to athletes' opinions jumped up to a 10 obtained score and increased by a 2.0 obtained score in total.

And in the last part of the questionnaire coaches responded that their support for athletes and their clear instructions to athletes did not change after using CoachTools. But coaches got more confident about their athletes when they are on the floor which saw an increase by a 2.0 obtained score while the appreciation of their athletes when they do something good got better from an 8.5 obtained score to a 9.5 obtained score.

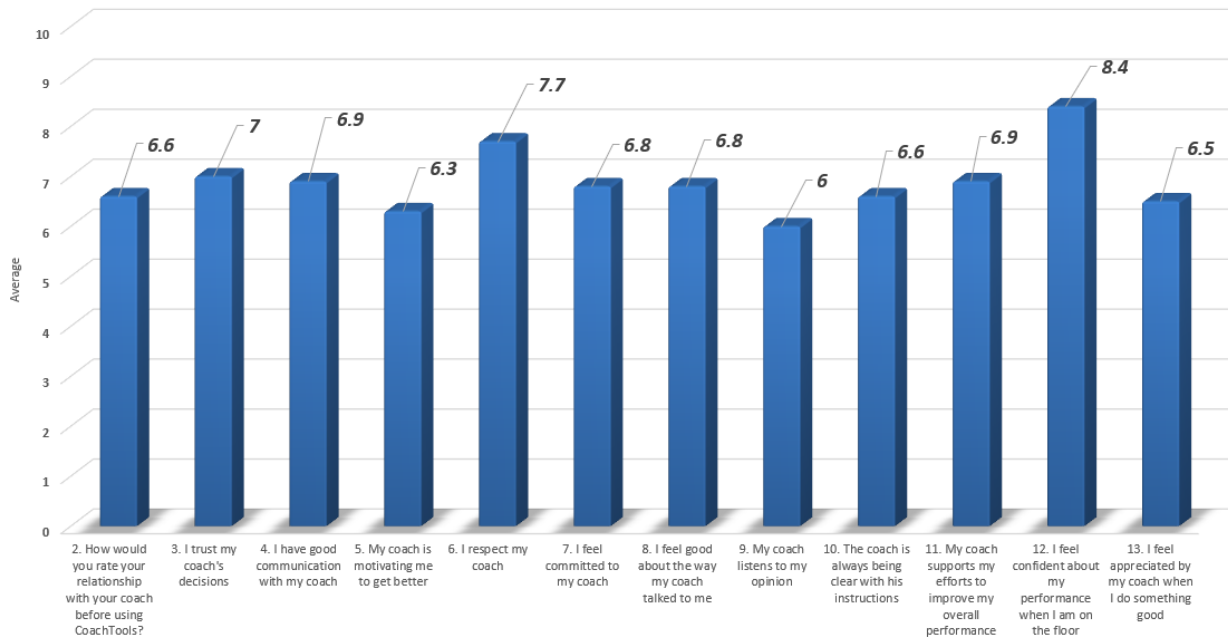Figure 4. Coach-athlete relationship before using CoachTools (Coach version).

Figure 5. Coach-athlete relationship after using CoachTools (Coach version).
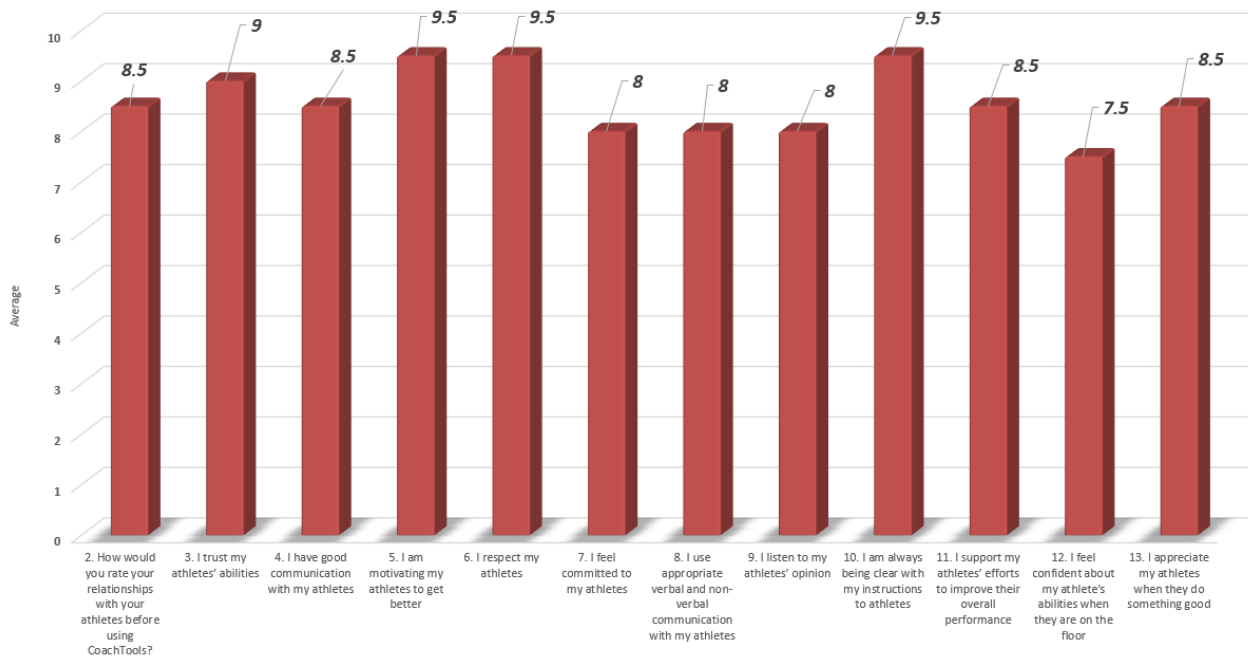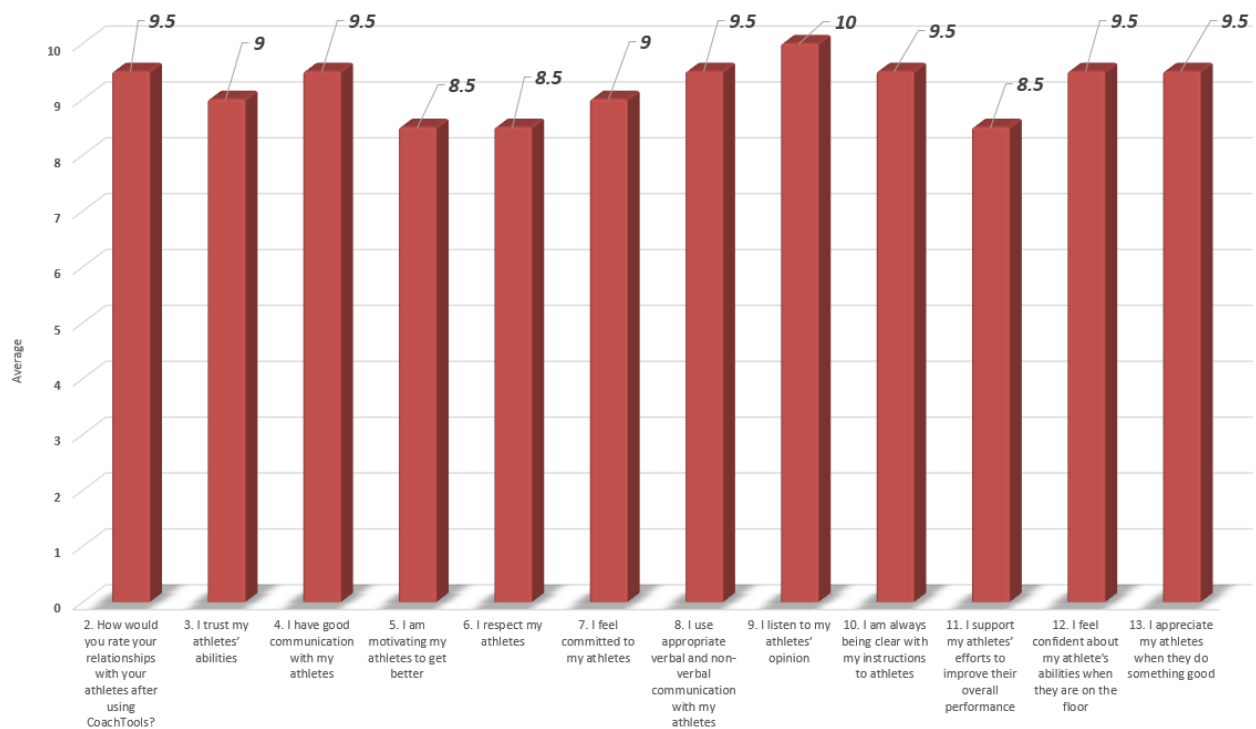
In conclusion, results showed that using digitalization tools helped respondents to improve the coach-athlete relationship. While it did not change that much for coaches but athletes it saw a big improvement.

9 Discussion

The results of this study showed that digitalization tools can help coach-athlete relationships in floorball. Athletes' responses appeared to have a bigger increase after the CoachTools platform was introduced than it was for coaches. For coaches, there was a decrease in motivating athletes and respect for athletes. The reason for it could be that the coaching staff had to take more time to adjust to the CoachTools platform and while that was happening coaches might have lost some motivation and energy.

Although, coaches responded with higher obtained scores than athletes it is really hard for coaches to evaluate all athletes in one assessment rather than evaluating them one by one. Coaches always try to do their best to help their team so it is understandable that coaches want to evaluate themselves as high as possible.

The theoretical part suggested that more communication is necessary for teams to be more successful and that mutual communication between a coach and an athlete is crucial. When coach communication is at a high level between athletes it increases athletes' performance and overall learning. For this to work, both need to have trust in each other that tasks will be done or support will be provided when it is necessary.

The result of the thesis is not so clear in a way that it is hard to measure if CoachTools was the only reason why the coach-athlete relationship improved. Although, the same coach has been in the team already two seasons before the CoachTools was introduced and then for the full season using the CoachTools platform. It is hard to conclude if the training system changed during a year or if collecting feedback after every practice helped the athletes. It could be also that using CoachTools improved athletes' overall time management and preparedness compared to previous seasons. The results were not so surprising for the author because athletes like it when a coach is trying to improve every year and if it also helps to improve results. The author believes that athletes responded positively to the questionnaire because they liked how the use of the CoachTools platform helped the team to move one step closer to professional training and it also showed positive results on the field.

With the results of this study, it is possible to say that more use of digitalization tools could be useful for improving a team's cohesion and overall performance. Athletes responded that their opinion has listened to more than before using digitalization tools. If coaches use more information gained from athletes, they can know better how they feel and what the team needs to do better. Results also showed that athletes' commitment increased after using CoachTools which is a very important thing that coaches want to have for their athletes. When an athlete is committed to the

team their motivation, grit, and work ethic improve as well because they want to give their best to help the team. Also coaches commitment is very important and when coaches gain more commitment to the team they will be more determined to help other athletes to get better.

Further research is needed to determine whether the use of a digitalization tool can help coaching and coach-athlete relationship over a longer period of time. One full season might not be as determined as the long-term development of the team. For some coaches, it can take a longer time to adapt to the digitalization tools platform and find the best use for the team. A lack of research has been done in floorball about coach-athlete relationships and athlete-centred coaching. For floorball to grow further these researches are needed so that coaches can be more educated about it and could use it in the practical training.

References

Choi, H., Jeong, Y. & Kim, S.K. 2020. The Relationship between Coaching Behavior and Athlete Burnout: Mediating Effects of Communication and the Coach-Athlete Relationship. International Journal of Environmental Research and Public Health.

CoachTools s.a., Main Benefits. URL: https://www.coachtools.net/#main-benefits Accessed: 13 May 2022

Coakley, J.J. 1986. Sport in Society: Issues and controversies (3rd ed.). St. Louis, MO: Times Mirror/Mosby.

Coakley, J.J. 1990. Sport in Society: Issues and controversies (4th ed.). St. Louis, MO: Times Mirror/Mosby.

Coe, C., Zehnder, A. & Kinlaw, D.C. 2007. Coaching for Commitment. Achieving Superior Performance from Individuals and Teams. Center for Creative Leadership. E-book. Accessed: 15 April 2022.

Gilbert, W. 2016. Coaching Better Every Season: A Year-Round System for Athlete Development and Program Success. Human Kinetics.

Hanton, S. & Mellalieu, S. 2012. Professional Practice in Sport Psychology. A Review. Taylor & Francis group. E-Book. Accessed: 14 April 2022.

International Floorball Federation s.a., Floorball in a nutshell. URL: https://floorball.sport/this-is-floorball/floorball-in-a-nutshell/ Accessed: 11 April 2022.

Jones, R.L. & Kingston, K. 2013. An Introduction to Sports Coaching. Connection Theory to Practice. Taylor & Francis Group. E-Book. Accessed: 20 April 2022

Kidman L. 2005. Athlete-centred Coaching: Developing Inspired and Inspiring People. IPC Print Resources. E-book. Accessed: 23 May 2022

Mageau, G.A. & Vallerand, R.J. 2003. The coach-athlete relationship: a motivational model. Journal of Sports Sciences, 21. 883-904. Accessed: 18 April 2022.

Miah, A. 2017. Sport 2.0: Transforming Sports for a Digital World. MIT Press. E-Book. Accessed: 1 May 2022

Nash, C. 2014. Practical Sports Coaching. Routledge. E-Book. Accessed: 1 May 2022

Oksanen, J. & Peltomäki, V. s.a. Youth start up kit. International Floorball Federation. URL: http://www.floorball.org/Materiaalit/Floorball%20Youth%20Start%20Up%20Kit.pdf Accessed: 11 April 2022.

Pasanen, K., Parkkari, J., Kannus, P., Rossi, L., Palvanen, M., Natri, A. & Järvinen, M. 2007. Injury risk in female floorball: a prospective one-season follow-up. Scandinavian Journal of Medicine & Science in Sports, 18, 1, pp. 49-54. Accessed 9 April 2022.

Segovia, M.G. & Kennett, C. 2021. Digitalization and Sports Sponsorship Strategy: A Review and Research Agenda. Annals of Applied Sport Science. URL: https://aassjournal.com/article-1-1066-en.pdf Accessed: 10 May 2022

Starthub s.a., CoachTools. URL: https://www.starthub.fi/en/startup/coachtools-2/ Accessed: 13 May 2022

Xiao, X., Hedman, J., Tan, F.T.C., Tan, C.W., Clemmensen, T., Lim, E., Henningsson, S., Mukkamala, R., Vatrapu, R. & van Hillegersberg, J. 2017. Sports Digitalization: A Review and A Research Agenda. ICIS 2017 Proceedings. 6. URL: https://ris.utwente.nl/ws/portalfiles/portal/28105561/Sports_Digitalization_A_Review_and_A_Research_Agenda.pdf Accessed: 21 May 2022

Appendices

Appendix 1. Questionnaire before using digitalization tool (Athletes)

HAAGA-HELIA
University of Applied Sciences

Coach-athlete relationship before using CoachTools
(Athlete)

(i) Mandatory questions are marked with a star (*)

2. How would you rate your relationship with your coach before using CoachTools? *

	0	1	2	3	4	5	6	7	8	9	10	
Not at all good	○	○	○	○	○	○	○	○	○	○	○	Extremely good

3. I trust my coach's decisions *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

4. I have good communication with my coach *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

5. My coach is motivating me to get better *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

(Iepriekšējais) (Nākošais)

ats (2 no 4)

HAAGA-HELIA
University of Applied Sciences

Coach-athlete relationship before using CoachTools
(Athlete)

ⓘ Mandatory questions are marked with a star (*)

6. I respect my coach *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

7. I feel committed to my coach *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

8. I feel good about the way my coach talked to me *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

9. My coach listens to my opinion *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

(Iepriekšējais) (Nākošais)

HAAGA-HELIA
University of Applied Sciences

Coach-athlete relationship before using CoachTools
(Athlete)

ⓘ Mandatory questions are marked with a star (*)

10. The coach is always being clear with his instructions *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

11. My coach supports my efforts to improve my overall performance *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

12. I feel confident about my performance when I am on the floor *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

13. I feel appreciated by my coach when I do something good *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

(Iepriekšējais) (Iesniegt)

Appendix 2. Questionnaire after using digitalization tool (Athletes)

HAAGA-HELIA
University of Applied Sciences

Coach-athlete relationship after using CoachTools (Athlete)

ⓘ Mandatory questions are marked with a star (*)

1. Please entrer your first name: *

Hello! My name is Ralfs Orste and I am a bachelor's degree student at Haaga-Helia University. I am researching the Coach-athlete relationship in an Athlete-centered coaching environment with digitalization tool use. Please fill in all the answers in this questionnaire honestly. Thank you!

Nākošais

HAAGA-HELIA
University of Applied Sciences

Coach-athlete relationship after using CoachTools (Athlete)

ⓘ Mandatory questions are marked with a star (*)

2. How would you rate your relationship with your coach after using CoachTools? *

	0	1	2	3	4	5	6	7	8	9	10	
Not at all good	○	○	○	○	○	○	○	○	○	○	○	Extremely good

3. I trust my coach's decisions *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

4. I have good communication with my coach *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

5. My coach is motivating me to get better *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

(Iepriekšējais) (Nākošais)

HAAGA-HELIA
University of Applied Sciences

Coach-athlete relationship after using CoachTools (Athlete)

ⓘ Mandatory questions are marked with a star (*)

6. I respect my coach *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

7. I feel committed to my coach *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

8. I feel good about the way my coach talked to me *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

9. My coach listens to my opinion *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

(Iepriekšējais) (Nākošais)

![HAAGA-HELIA University of Applied Sciences]

Coach-athlete relationship after using CoachTools (Athlete)

ⓘ Mandatory questions are marked with a star (*)

10. The coach is always being clear with his instructions *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

11. My coach supports my efforts to improve my overall performance *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

12. I feel confident about my performance when I am on the floor *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

13. I feel appreciated by my coach when I do something good *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

(Iepriekšējais) (Iesniegt)

Appendix 3. Questionnaire before using digitalization tool (Coaches)

HAAGA-HELIA
University of Applied Sciences

Coach-athlete relationship survey before using CoachTools (Coach)

ⓘ Mandatory questions are marked with a star (*)

1. Please enter your first name:

Hello! My name is Ralfs Orste and I am a bachelor's degree student at Haaga-Helia University. I am researching the Coach-athlete relationship in an Athlete-centered coaching environment with digitalization tool use. Please fill in all the answers in this questionnaire honestly. Thank you!

Next

HAAGA-HELIA
University of Applied Sciences

Coach-athlete relationship survey before using CoachTools
(Coach)

ⓘ Mandatory questions are marked with a star (*)

2. How would you rate your relationships with your athletes before using CoachTools? *

	0	1	2	3	4	5	6	7	8	9	10	
Not at all good	○	○	○	○	○	○	○	○	○	○	○	Extremely good

3. I trust my athletes' abilities *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

4. I have good communication with my athletes *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

5. I am motivating my athletes to get better *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

(Previous) (Next)

HAAGA-HELIA
University of Applied Sciences

Coach-athlete relationship survey before using CoachTools
(Coach)

(i) Mandatory questions are marked with a star (*)

6. I respect my athletes *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

7. I feel committed to my athletes *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

8. I use appropriate verbal and non-verbal communication with my athletes *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

9. I listen to my athletes' opinion *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

(Previous) (Next)

HAAGA-HELIA
University of Applied Sciences

Coach-athlete relationship survey before using CoachTools (Coach)

ⓘ Mandatory questions are marked with a star (*)

10. I am always being clear with my instructions to athletes *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

11. I support my athletes' efforts to improve their overall performance *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

12. I feel confident about my athlete's abilities when they are on the floor *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

13. I appreciate my athletes when they do something good *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

(Previous) (Submit)

Appendix 4. Questionnaire after using digitalization tool (Coaches)

HAAGA-HELIA
University of Applied Sciences

Coach-athlete relationship survey after using CoachTools (Coach)

ⓘ Mandatory questions are marked with a star (*)

1. Please enter your first name: *

Hello! My name is Ralfs Orste and I am a bachelor's degree student at Haaga-Helia University. I am researching the Coach-athlete relationship in an Athlete-centered coaching environment with digitalization tool use. Please fill in all the answers in this questionnaire honestly. Thank you!

Next

HAAGA-HELIA
University of Applied Sciences

Coach-athlete relationship survey after using CoachTools (Coach)

ⓘ Mandatory questions are marked with a star (*)

2. How would you rate your relationships with your athletes after using CoachTools? *

	0	1	2	3	4	5	6	7	8	9	10	
Not at all good	○	○	○	○	○	○	○	○	○	○	○	Extremely good

3. I trust my athletes' abilities *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

4. I have good communication with my athletes *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

5. I am motivating my athletes to get better *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

(Previous) (Next)

HAAGA-HELIA
University of Applied Sciences

Coach-athlete relationship survey after using CoachTools (Coach)

ⓘ Mandatory questions are marked with a star (*)

6. I respect my athletes *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

7. I feel committed to my athletes *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

8. I use appropriate verbal and non-verbal communication with my athletes *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

9. I listen to my athletes' opinion *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

(Previous) (Next)

HAAGA-HELIA
University of Applied Sciences

Coach-athlete relationship survey after using CoachTools (Coach)

ⓘ Mandatory questions are marked with a star (*)

10. I am always being clear with my instructions to athletes *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

11. I support my athletes' efforts to improve their overall performance *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

12. I feel confident about my athlete's abilities when they are on the floor *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

13. I appreciate my athletes when they do something good *

	0	1	2	3	4	5	6	7	8	9	10	
Strongly disagree	○	○	○	○	○	○	○	○	○	○	○	Strongly agree

(Previous) (Submit)