How has technology impacted on the olympic games

Entertainment, Games

YEAR 10 PASS ASSIGNMENT How hastechnologyimpacted on the Olympic Games? Consider: 1. How has technology contributed to the performance levels at the Olympics (5 Marks) 2. The Impact of technology for participants, officials, coaches and spectators (5 Marks) 3. What are the major ethical implications of the use of technology at the Olympics? (5 Marks) 4. In your opinion how will future advancements in technology effect i) Future Olympics ii) Participant in sport How much has technology impacted the Olympics?

I'd say greatly due to the performance levels of the athletes, the opportunities for the participants, coaches, officials and spectators, the ethical implications and the ongoing breaking of records throughout history. Technology keeps improving and therefore improving the athletes as well so the question is, how far can they go? 1. In the Olympics, technology has contributed to the performance of athletes greatly due to new training techniques through technology and the advancements in technology like clothing, playing surfaces and equipment.

Technology has also allowed athletes to recover from injury faster through rehabilitation technology like fitness machines which isolate points of weakness inside the body and creates an exercise which strengthens the point of weakness and therefore helps the athlete lead to a full recovery and even perform better when they return to the sport. Inswimming, Speedo, a swimwear company have developed a Fastskin3 Racing System which includes goggles, cap and a suit(shorts for men and full suit for women. This quipment has revolutionized the sport of swimming by offering swimmers a cohesive, hydrodynamic solution to cut through the water with maximum

efficiency. " The Speedo FASTSKIN3 Racing System offers unrivalled benefits to swimmers, including a full body passive drag reduction of up to 16. 6%, an 11% improvement in the swimmer's oxygen economy enabling them to swim stronger for longer, and a 5. 2% reduction in body active drag , to create the world's fastest cap, goggle and suit ever. " This is from the Speedo website explaining the technological advancements in the Speedo swimsuits over the years.

This combination of the cap, goggles and swimsuit is said to be world's fastest. In long distance cycling, the athletes use the latest technological advanced bikes that have light weight frames, large, thin tires (to achieve more distance per pedal and give a smoother ride), comfortable saddles and handlebars, and several gears for going up and down hills. They also use heart rate monitors to track and measure where they should be in the race. In training, the athletes would measure when and where their heart rate should be in the race and then transfer this into the race.

Another technology used by long distance cyclists is a simple two way radio which communicates with fellow team mates and the drivers behind the cyclists telling them when a break is coming up or a turn is approaching. The athletes also have a suit, helmet and shoes to wear while riding. The suit, helps the athlete stay dry and cool as well as filtrate sweat off the body. The helmet provides an aerodynamic form reduces wind resistance and obviously provides protection for the head when falling. The shoes the athlete wears provides comfort and grip on the peddles for the long journey.

In Athletics, there are many sports which rely on the technology of the surface, the equipment the athletes use and the clothing they are wearing. In sprinting, the athlete needs light weight shoes like the Lunar Eclipse+2's which proides maximum comfort and flexibility for the runner. The shoe also provides the added stability for the athlete without the additional weight to the shoe. The suits they wear also affect their performance because they keep the body cool and holds the muscles steady as they run so they don't pull or send the muscle into spasm.

The surface also effects the performance of a sprinter because if the surface they are competing on is sand, then the athlete would not be able to perform at they're best. But if they competed on a synthetic track (which is used in London 2012), they would be able to perform to their absolute best. This can also be related to other sports like: any court related sports like tennis, athletic field events and cycling. 2. The Olympics are an event which technology is used by participants, officials, coaches and spectators.

Technology has made a massive impact on the Olympics now because spectators can now access results from their mobiles, athletes can look over their technique through watching a video of themselves slowed down to a speed of 1000 images per second, officials can tell whether an athlete won a race by 1 millisecond or 1. 1 milliseconds through technology and coaches can watch and measure their athletes performance. All these things came from and through technology. Spectators now have higher viewing opportunities and better understanding of the results through television.

The officials are able to explain the results through their digital timing technology and show how the athlete won or lost. Not only do spectators have the opportunity to understand the results they can view them anywhere they go through their mobile phones or laptops. They have the ability to whip out their phones and check results in the 100m final in the athletics and by going into special London 2012 apps on iPhones, iPads, Android phones and simply the London 2012 website.

The technology that spectators are available to now, is beyond imaginable and spectators don't even have to be at their games to enjoy them, they can watch the games through their TV, mobile phones and laptops. Athletes and coaches now use video analysis to perfect the athletes techniques by going over the videos again and again until the athlete is perfect and ready for competing. The video can be broken down into images which show the different stages of movement. The athlete and coach can then see and tweak the performance and plan how they can resolve the issues in the performance.

Officials now have the opportunity to use technology like hawk- eye and goal-line referee to decide whether there should be a point given. The hawk-eye technology shows whether a ball in tennis is in or out and the goal-line referee is used insoccerdecide whether there is a goal or not and to provide another point of view for the spectators. Digital timing is another form of technology which officials use in timed events like swimming and running events. They use cameras, lasers and pressure systems to determine the times for the athletes in the race.

There are pressure pads on the starting blocks in swimming and sprinting events so they can determine reaction times and therefore determining a false start. There are also pressure pads on the walls of the swimming pools so when the swimmers touch the pads, it records the amount of time it took the get there. Lasers are now used in running events to tell the officials when the runner crossed the line and determine who came first or second by 1 millisecond. All this technology in the London 2012 Olympic Games was provided by a company called OMEGA who specializes in this type of technology.

BMW have created a technology which tracks a device on the athlete which shows the movement of them. It is mostly used in long jumping because it shows the elevation and distance the athlete jumped as well as the speed they were travelling at. This sort of technology has evolved from film camera, to high speed digital video, to today's 3D " machine vision" technology. 3. Technology in sport is aimed to :- achieve ultimate human performance - aid performance - facilitate faster times help athletes break records - faster recovery from injury -make performance more efficient These definitions are from Exploring PASS and they are absolutely right. This is what technology is supposed to do for sport but in some cases it doesn't and causes negative effects on sport. These effects are increased injuries, possible loss of tradition in the sport and the exclusion of athletes due to loss of access of the technology. In the 1896 Athens Olympic Games, the marathon was run 60 minutes slower than the 2008 Beijing Olympics.

This shows the effects technology has had on the Olympics because as time has carried on technology has advanced and so have the athletes therefore beating records every year. Now, what would happen if the athlete who came first in the marathon in 1896 ran the marathon today with all the latest technology and the newest equipment? The Olympics is a massive multicultural event which has a lot of 3rd world countries which only compete in the sports that they have access to like athletics.

Some countries don't have access to the expensive equipment and advanced training equipment which is necessary to keep up with the world. Higher Financed countries like USA are able to experiment with technology and find new ways to improve their athletes performance which is why they had developed a $5million pursuit bicycle to minimize air resistance and create a better time. Only athletes with the proper economic status would be able to gain access to this equipment. In Australia we have the AIS (Australian Institute of Sport) which is facility who develops athletes to their ultimate best.

Not only does this institute help athletes reach their best, they are one of the leading facilities in Sport Technology. The AIS keep moving forward in the ways of sport technology and our government provides greatly to help support their research. The Olympics is one of the most competitive sporting events in the world and some athletes think that they need to do whatever it takes to bring home a gold. This can result to drug use, mostly steroids. Steroids is a drug which enhances your performance and helps you gain an edge on the sport.

Even though this may sound good, there are disadvantages to this drug. There is aggressive behaviour, depression, sterility in males, masculinisation in women, heart disease and liver damage. Since their have been athletes to have done this, drug testing is a common element in the Olympics to ensure a sense ofequalityin the games. Technology can also be used to lessen the detection of drugs for which you might of used. Diuretics are used to reduce the presence of drugs in urine. Epitestosterone is biological form of testosterone and Plasma expanders are used to increase the fluid component of blood.

So technology in the Olympics can be used for good and bad reasons, it can be expensive and inaccessible to some countries which also creates inequality in the games but even though their might be inequality when training, technology in the games makes sure that every athlete is given a fair go by digital timing and drug testing on all athletes. 4. i) As technology is being improved everyday and every Olympics, new records are being made, I think that in future Olympics records will still be beaten but as the years go on the athletes won't be able to go any further and so technology with have taken over the Olympics fully.

But I also think that athletes will see that there is a limit and stop before the sport they love loses its tradition and meaning. Since the athletes will only use technology if they need it to train, I think that the technology used in faster recoveries will never reach a limit and just keep advancing through the ages. For example, Athletes won't have to worry about serious injury

since they have a machine which can regenerate a muscle back to fullhealthin a day or hours.

Technology will never have a limit so forming new training techniques and new equipment for the athletes to use will help the athletes stay inside of the ethical guidelines of the Olympics but the athletes will not have technology attached or inside of them to enhance their performance so it doesn't destroy the sport. ii) Since technology is advancing and now that you have the opportunity to play tennis inside your own home using a Wii or Xbox Kinect and play other around the world means that soon everyone might want to do this and less people will want to participate in sport outside.

Technology will soon want to accompany all physical and mental types around the world so a new technology that might want to involve elderly people thinking they are playing sport through a headset might transfer itself to the teenage generation and then move to all the others and therefore taking away participation in sport. Not only will this cause possible health problems for people who use such technology, it can also lead to social isolation. Technology which is used for sport performance should make the participant go outside to perform rather than stay indoors, technology should promote the sport and not do the job for them.