



Introduction to Aerial Warfare in World War I:

It took just 10 years from the first flight for the aeroplane to become a new military weapon.

Prior to World War I, flight had been seen as an activity only for the rich and indulgent, but its use in combat changed that perception completely.

Well before WWI, balloons had already been used for observation during conflicts, although these were rather primitive and unreliable. As the threat of war approached, some forward thinking Army and Navy personnel were already seeing how improvements could be made to reconnaissance and observation.

At the outbreak of war in 1914, aircraft were used primarily for reconnaissance – flying over battles and enemy lines to track movements and positions.

The Royal Flying Corps

The Royal Flying Corps (RFC) had been formed in 1912, merging the aircraft sections of the Royal Engineers and Royal Navy. Officers wishing to join the RFC could do so if they privately obtained their Aviators Certificate first.

Aerial Combat

As war progressed, and with more aircraft in the skies, aircrew took to carrying guns to fire at one another. Aerial combat was initially infrequent, but casualties mounted as the air war intensified with the development of mounted machine guns, and some aircraft were used to drop bombs. Initially aircrew would drop these over the side of the aircraft until more sophisticated systems were introduced. This altered the nature of warfare as civilian populations, previously safe behind the front lines, were now in danger of attack from above.

Communications

The introduction of aircraft into warfare brought about a new problem – how to communicate with aircrew in the skies.

Early communication involved aircrew dropping messages in bottles or canisters out of the aircraft, and ground crew would reciprocate with basic codes laid out in fabric on the ground.

The development of wireless technology allowed aircrew to send Morse Code messages to a receiver on the ground, but this was large and heavy equipment and it had a very short range.

Aerial Reconnaissance

As trench warfare set in, the Army needed to exploit any advantage the RFC might provide, and new ground support roles soon developed. The accurate firing of long-range guns was vital, and aircraft were used to locate targets and direct artillery fire onto them.

Aerial photography, which had wider applications in mapping and intelligence, was also introduced to spot targets for the British gunners.

By 1915, aeroplanes were also bombing German supply lines and attacking enemy troops from the air. The RFC's main contribution to the Allied success in 1918 was in support of the Army's ground forces.

The Hazards of Flight

Dowding's reconnaissance reports highlight some of the hazards of aerial warfare such as the unreliability of engines and navigating in poor visibility; bad weather in general often prevented flying. With the onset of trench warfare, airmen faced the added hazard of anti-aircraft fire or 'Archie', as each side tried to stop the spying activities of the other.

Birth of the Royal Air Force

In April 1918 the RFC and the Royal Naval Air Service (RNAS) merged to form an independent Royal Air Force (RAF).

The RFC's motto had been **Per ardua ad astra**, "*Through adversity to the stars*". This remains the motto of the Royal Air Force (RAF) and other Commonwealth air forces.

During World War I, the casualties from the Royal Flying Corps, Royal Naval Air Service and Royal Air Force totalled 9,378 killed or missing and 7,245 wounded.
