Interface, interaction and interactivity: Understanding ImpaCT of technology in classroom from a Cultural Historical Activity Theory perspective

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Based on a recent research this paper provides an understanding around different levels of information and communication input output (ICIO) that occurs in a learning episode and how these different levels impact learning when technology is used as a tool in classroom; specifically, Interactive Whiteboards (IWBs). Cultural Historical Activity Theory (CHAT) provides an appropriate framework to examining the ICIO in human activity and consciousness in the context in which they occur. The hierarchical structure of activity as proposed in Leont'ev (1978) helps to identified ICIO that fosters learning. Leont'ev (1978) argues that there are three level of interaction in human labour; operations, actions and activity. Using these frameworks current research has identified a complex system of ICIO around technologies as interface, interaction and interactivity. The findings suggest the level of ICIO is based on the learning goals, and are embedded within an activity system. The findings break down ICIO into interface, as the lowest level, interaction as the second level and interactivity as the highest level of ICIO. The research concludes that higher the ICIO the more learning.