$$\int_{\mathbb{C}^n\times\mathbb{C}^n} \bar{\partial}\phi(z)\wedge K(z,w)\wedge\varphi(w)$$

$$K_\varphi\circ\bar{\partial}(\phi) = K_\varphi(\bar{\partial}\phi) = \int_{\mathbb{C}^n} K(\varphi)(z)\wedge\bar{\partial}\phi(z)$$

$$= \int_{\mathbb{C}^n}\int_{\mathbb{C}^n} \overset{2n-1}{K(z,w)}\wedge\overset{q}{\varphi(w)}\wedge\overset{2n-q+1}{\bar{\partial}\phi}$$

$$= (-1)^{q-1}\int_{\mathbb{C}^n\times\mathbb{C}^n} \bar{\partial}\phi\wedge K(z,w)\wedge\varphi(w).$$

$$K_{\bar{\partial}\varphi}(\phi) = \int_{\mathbb{C}^n} K(\bar{\partial}\varphi)(z)\wedge\phi(z)$$

$$= \int_{\mathbb{C}^n}\left(\int_{\mathbb{C}^n} K(z,w)\wedge\bar{\partial}\varphi(w)\right)\wedge\phi(z)$$

$$= \int_{\mathbb{C}^n\times\mathbb{C}^n} \overset{2n-1}{K(z,w)}\wedge\overset{q+1}{\bar{\partial}\varphi(w)}\wedge\overset{2n-q}{\phi(z)} = (-1)^q\int_{\mathbb{C}^n\times\mathbb{C}^n}\phi(z)\wedge K(z,w)\wedge\bar{\partial}\varphi(w)$$

$\Rightarrow$ The first term is $(-1)^{q-1}K_\varphi\circ\bar{\partial}(\phi)$ and the second term is $(-1)^q K_{\bar{\partial}\varphi}(\phi)$.

$\Rightarrow \quad (-1)^{q-1}K_\varphi\circ\bar{\partial}(\phi) + (-1)^{q+1}(-1)^q K_{\bar{\partial}\varphi}(\phi) = 0$

$\Rightarrow \quad K_{\bar{\partial}\varphi}(\phi) + (-1)^q K_\varphi\circ\bar{\partial}(\phi) = 0$

$\Rightarrow \quad K_{\bar{\partial}\varphi} + (-1)^q K_\varphi\circ\bar{\partial} = 0.$

$\Rightarrow$ By p369. $\bar{\partial}K_\varphi = K_{\bar{\partial}\varphi}$. $\Rightarrow \bar{\partial}K_\varphi + (-1)^q K_\varphi\circ\bar{\partial} = 0$