$$\begin{array}{ccccc}
\mathcal{V} & \xrightarrow{\ A\ } & \mathcal{W} & \xrightarrow{\ B\ } & \mathcal{Z} \\
\updownarrow {\scriptstyle \{v_i\}} & & \updownarrow {\scriptstyle \{w_i\}} & & \updownarrow {\scriptstyle \{z_i\}} \\
\mathbb{C}^n & \xrightarrow{\ M\ } & \mathbb{C}^m & \xrightarrow{\ N\ } & \mathbb{C}^d
\end{array}$$