It is true. MLPs can learn complex relationships between input features, thanks to their multiple layers and non-linear activation functions (like ReLU). Logistic regression, being a linear model, is limited to learning linear decision boundaries. However, the non-linear activation functions and multiple layers introduce complexities and finding the right architecture and hyperparameters can be harder. Logistic regression, on the other hand, is a simpler model and involves convex optimization, making it computationally less demanding.

To prove that training a logistic regression model is easier because it is a convex optimization, we should first state that the update phase searches for a minimum. Duo to being convex, not only, it is easy to find a minimum, it is also unique because it is strictly convex. And because it's simple, it needs fewer epochs to train.

In contrast, MLPs with non-linear activations involve non-convex optimization, and finding the global minimum is not guaranteed. Training an MLP may require more sophisticated optimization techniques and careful initialization of weights to avoid issues.