What if $h$ is constant?

If $h(y_i)$ is constant, then we have:

$$
\sum_{i=1}^{m} \left( \frac{f(y_i)}{g(y_i)} \right) h
= \sum_{i=1}^{m} \left( \frac{f(y_i)}{g(y_i)} \right)
= \sum_{i=1}^{m} \left( \frac{f(y_i)}{g(y_i)} \right)
= h
$$

Thus, since this estimator is always $h$ (when $h$ is constant), then it is superior to the estimator in (a). In part (a), an expectation must still be taken; whereas here the estimator will always be