```
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns

np.random.seed(123)
# create a figure and axes
fig = plt.figure(figsize=(12,5))
ax1 = plt.subplot(1,2,1)
ax2 = plt.subplot(1,2,2)

# set up the subplots as needed
ax1.set_xlim(( 0, 100))
ax1.set_ylim((0.9, 6.1))
ax1.set_xlabel('Number of Trials')
ax1.set_ylabel('Outcome')

ax2.set_xlim(( 0, 100))
ax2.set_ylim((-0.1,1.1))
ax2.set_xlabel('Number of Trials')
ax2.set_ylabel('Relative Frequency')









Nmax = 100
Outcome_hist = [np.random.randint(1, 7) for i in range(Nmax)]
Frequency_hist = [sum(1 for num in Outcome_hist[0:n] if num == 1 or num == 2)/(n+1) for n in range(Nmax)]


Probability = 1/3
ax1.scatter(np.arange(Nmax), np.array(Outcome_hist))
ax2.plot(np.arange(Nmax), np.array(Frequency_hist), 'r', lw=2, label="Relative Frequency")
ax2.plot(np.arange(Nmax), Probability*np.ones(Nmax), 'b-', lw=2, label="Probability of Event A")
ax2.legend(fontsize=20)
plt.show()
```