```
In [5]:  '''
         Element structure: [coeff, se, 90%, 95%]
         '''

         final = []
         for i in range(500):
             element = []
             temp = df.sample(n=100, replace=True)
             model = sm.OLS(temp['loguwe'], temp['yearsEd']).fit()
             element.append(float(model.params))
             element.append(float(model.bse))
             element.append(st.t.interval(0.90, len(temp)-1, loc=np.mean(temp.yea
         rsEd), scale=st.sem(temp.yearsEd)))
             element.append(st.t.interval(0.95, len(temp)-1, loc=np.mean(temp.yea
         rsEd), scale=st.sem(temp.yearsEd)))
             final.append(element)
```

```
In [6]:  final[0]
```

```
Out[6]:  [0.4571149008385476,
          0.011885188781245776,
          (13.248471393537141, 14.591528606462857),
          (13.117503287370255, 14.722496712629745)]
```

Part C

```
In [7]:  def find_mean(final, category):
             total = 0
             arr = []
             for i in final:
                 arr.append(i[category])
                 total += i[category]
             dev = statistics.stdev(arr)
             return total/len(final), dev
```

```
In [8]:  find_mean(final, 0)
```

```
Out[8]:  (0.45727115949713376, 0.006975775046609794)
```

```
In [9]:  consistency_90 = 0
         hits = 0
         for i in final:
             if .4566 in i[2]:
                 hits += 1

         consistency_90 = hits/500
         consistency_90
```

Out[9]: 0.0

```
In [10]:  array1 = [x[0] for x in final]
```

Part D

```
In [11]:  plt.hist(array1)
```

Out[11]: (array([4., 14., 27., 51., 125., 103., 80., 66., 23.,   7.]),
          array([0.43604866, 0.44002874, 0.44400882, 0.4479889 , 0.45196897,
                 0.45594905, 0.45992913, 0.46390921, 0.46788929, 0.47186937,
                 0.47584945]),
          <a list of 10 Patch objects>)
```