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          -0.6260,  0.7429, -0.2509,  0.3613,  0.5531, -0.7558, -0.1911,
           0.6173,  0.6466]]]), Property(name='output', fullname='IL/
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           0.2826,  0.0881,  0.5776,  0.0897,  0.4398, -0.2875, -0.4864,
           0.1264,  0.4127, -0.4005, -0.4388, -0.4255,  0.3032,  0.5643,
          -0.3382,  0.5245,  0.5295,  0.6634, -0.3066,  0.5190, -0.0719,
          -0.3011, -0.0598,  0.1207,  0.0248,  0.7067, -0.2743,  0.4763,
           0.0849,  0.7273, -0.6031, -0.4073,  0.3097,  0.5713,  0.1126,
          -0.4329, -0.1603, -0.5367, -0.0700, -0.4860, -0.5355, -0.4338,
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          -0.4937,  0.4730, -0.2643, -0.7382,  0.6449,  0.5790, -0.4383,
           0.1281,  0.2645,  0.0120, -0.3579, -0.0595,  0.3221, -0.6708,
           0.0636, -0.4506]],

         [[ 0.1176, -0.0265,  0.4157,  0.5188, -0.2767, -0.6351,  0.5222,
            0.5221, -0.6258,  0.1285, -0.0047,  0.0326,  0.2129, -0.1072,
           -0.2200, -0.2056,  0.7299, -0.1149,  0.4280, -0.0537, -0.1961,
            0.0227,  0.1415, -0.3378, -0.3906, -0.0583, -0.0149, -0.2206,
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            0.2685,  0.0092, -0.3589, -0.3232, -0.1981, -0.2366, -0.1998,
           -0.4239, -0.2825,  0.0317, -0.0162,  0.5221, -0.0948,  0.2677,
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           -0.0147,  0.1864,  0.4960,  0.1655,  0.0109, -0.5809,  0.7831,
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            0.2412,  0.4217, -0.3141, -0.4727, -0.5293, -0.2279,  0.3419,
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           -0.1705,  0.4328]],

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            0.8565, -0.0205,  0.2498,  0.2331,  0.2104,  0.2560, -0.5952,
            0.1382,  0.5395,  0.5382, -0.1924, -0.7564,  0.2685,  0.0344,
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```

```
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           0.0445,  0.0455]],

        [[ 0.2546,  0.7501,  0.6714,  0.2281, -0.0509, -0.5007,  0.0051,
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          -0.3072, -0.5140,  0.2463,  0.0955, -0.0149,  0.3858,  0.0760,
          -0.1180, -0.0329,  0.4396, -0.4899, -0.4729, -0.0806,  0.7230,
           0.3702,  0.1893, -0.6043,  0.5026,  0.0707, -0.5879,  0.6097,
          -0.1934,  0.3787,  0.7189, -0.1899,  0.5573, -0.3513, -0.7590,
          -0.0943, -0.0350, -0.0096, -0.0957,  0.0776,  0.0900,  0.3299,
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           0.4507,  0.1178]],

        [[-0.2015, -0.6769, -0.0590,  0.6375, -0.2931,  0.0945, -0.0661,
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           0.0106, -0.7558,  0.4331, -0.0907,  0.2805, -0.1632, -0.4053,
          -0.7821, -0.2662,  0.0715, -0.1044, -0.6325,  0.5794,  0.3851,
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           0.0258,  0.0997, -0.2131, -0.6057, -0.4706,  0.7584,  0.2904,
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           0.0491,  0.1652,  0.2421,  0.0881,  0.6127,  0.1363, -0.4002,
           0.0776,  0.2283,  0.2150,  0.5623,  0.1691,  0.2943, -0.4322,
           0.5799, -0.3357,  0.2781,  0.3840,  0.3162, -0.4196, -0.7347,
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           -0.5850]],

         [[-0.2811,  0.5503,  0.7632, -0.0203, -0.0216, -0.3503, -0.0708,
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            0.2337]],

         [[-0.5167, -0.1227, -0.2023, -0.5109,  0.0633, -0.2841,  0.4118,
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           0.3121,  0.0669, -0.7234, -0.0572,  0.3460, -0.0994, -0.0839,
          -0.4617]],

         [[-0.1248,  0.7966, -0.0825, -0.1492,  0.2987,  0.0200, -0.8902,
           -1.3239,  0.5318,  0.2055, -0.3890, -0.1369, -0.2255,  0.5927,
            0.2473, -0.3197,  0.2356, -0.1838,  0.4011,  0.2945, -0.3229,
            0.3750]],

         [[ 0.7259,  0.0919, -0.6471, -0.4827, -0.5706,  1.3799,  0.1556,
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           -0.5850]],

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           -0.5245, -0.1018,  0.1850, -0.4095,  0.3898,  0.0927, -0.4615,
            0.2337]],

         [[-0.5167, -0.1227, -0.2023, -0.5109,  0.0633, -0.2841,  0.4118,
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           -0.0573]]]), 'CounterGetDataNode': 1}
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'hexagon']], 'graph': Graph(name='IL', fullname='IL'), 'READER': 0,
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'he1(t2)'),): {'counter': 1, 'recent': True}}, 'dataNode': [utterance
0], 'IL/utterance/index': [utterance 0],
ReaderSensor(name='readersensor', fullname='IL/utterance/
tokenized_text_s/readersensor'): [['me1(t1)', 're1(t1)', 'st1(t1)',
'le2(t2,t1)', 'he1(t2)']], 'DataNodeTime': 0.003998994827270508,
Property(name='tokenized_text_s', fullname='IL/utterance/
tokenized_text_s'): [['me1(t1)', 're1(t1)', 'st1(t1)', 'le2(t2,t1)',
'he1(t2)']], 'Counter/IL/utterance/tokenized_text/readersensor-1':
{(('medium', 'red', 'star', 'right', 'hexagon'),): {'counter': 1,
'recent': True}}, ReaderSensor(name='readersensor-1', fullname='IL/
utterance/tokenized_text/readersensor-1'): [['medium', 'red', 'star',
'right', 'hexagon']], Property(name='tokenized_text', fullname='IL/
utterance/tokenized_text'): [['medium', 'red', 'star', 'right',
'hexagon']], JointSensor(name='jointsensor', fullname='IL/word/
(Contains(name='utterance-contains-0-word', fullname='IL/utterance-
contains-0-word'), 'sit', 'utt')/jointsensor'): (tensor([[1.],
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        [1.],
        [1.],
        [1.]]), ['me1(t1)', 're1(t1)', 'st1(t1)', 'le2(t2,t1)',
'he1(t2)'], ['medium', 'red', 'star', 'right', 'hexagon']),
Property(name='(Contains(name='utterance-contains-0-word', fullname='IL/
utterance-contains-0-word'), 'sit', 'utt')', fullname='IL/word/
(Contains(name='utterance-contains-0-word', fullname='IL/utterance-
contains-0-word'), 'sit', 'utt')'): (tensor([[1.],
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        [1.],
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        [1.]]), ['me1(t1)', 're1(t1)', 'st1(t1)', 'le2(t2,t1)',
'he1(t2)'], ['medium', 'red', 'star', 'right', 'hexagon']), 'Counter/IL/
word/utterance-contains-0-word/edgesensor': {tensor([[1.],
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        [1.]]): {'counter': 1, 'recent': True}}, 'IL/word/index': [word
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fullname='IL/word/utterance-contains-0-word/edgesensor'): tensor([[1.],
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        [1.],
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word/utterance-contains-0-word'): tensor([[1.],
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        [1.],
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FunctionalSensor(name='functionalsensor-1', fullname='IL/word/utt/
functionalsensor-1'): ['medium', 'red', 'star', 'right', 'hexagon'],
Property(name='utt', fullname='IL/word/utt'): ['medium', 'red', 'star',
'right', 'hexagon'], 'Counter/IL/word/<label>/functionalsensor-2':
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Property(name='label', fullname='IL/word/<label>'): tensor([[[ 0.8651,
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          0.3121,  0.0669, -0.7234, -0.0572,  0.3460, -0.0994, -0.0839,
         -0.4617]],

        [[-0.1248,  0.7966, -0.0825, -0.1492,  0.2987,  0.0200, -0.8902,
         -1.3239,  0.5318,  0.2055, -0.3890, -0.1369, -0.2255,  0.5927,
          0.2473, -0.3197,  0.2356, -0.1838,  0.4011,  0.2945, -0.3229,
          0.3750]],

        [[ 0.7259,  0.0919, -0.6471, -0.4827, -0.5706,  1.3799,  0.1556,
          0.3839,  0.0344,  0.2245, -0.3579,  0.1177, -0.2030, -0.5705,
         -0.0503,  0.6394,  0.1455, -0.0655, -0.3522, -0.3745, -0.3249,
         -0.5850]],

        [[-0.2811,  0.5503,  0.7632, -0.0203, -0.0216, -0.3503, -0.0708,
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         -0.5245, -0.1018,  0.1850, -0.4095,  0.3898,  0.0927, -0.4615,
          0.2337]],

        [[-0.5167, -0.1227, -0.2023, -0.5109,  0.0633, -0.2841,  0.4118,
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        [21],
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         [[ 0.1176, -0.0265,  0.4157,  0.5188, -0.2767, -0.6351,  0.5222,
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           -0.0334, -0.6605, -0.5908, -0.1287,  0.2281,  0.7163, -0.4613,
           -0.0147,  0.1864,  0.4960,  0.1655,  0.0109, -0.5809,  0.7831,
            0.0314, -0.1486, -0.3157,  0.5482,  0.5680,  0.1560, -0.7233,
            0.2412,  0.4217, -0.3141, -0.4727, -0.5293, -0.2279,  0.3419,
            0.5124, -0.2481,  0.3036,  0.1861, -0.2835, -0.4180,  0.1760,
            0.2913,  0.0226,  0.1762,  0.1077, -0.1689, -0.8643,  0.3530,
           -0.1705,  0.4328]],

         [[ 0.7214, -0.2968, -0.0877,  0.5973,  0.5533,  0.3787, -0.5352,
           -0.0513, -0.0608,  0.4993, -0.0984,  0.1059, -0.4236, -0.1874,
            0.0845, -0.5552, -0.5669, -0.6663, -0.1576, -0.6505,  0.0417,
           -0.0287,  0.1185, -0.1258,  0.1301, -0.2580, -0.1748, -0.3623,
            0.3499,  0.1540, -0.1759, -0.1094,  0.5752,  0.4120,  0.0733,
            0.8565, -0.0205,  0.2498,  0.2331,  0.2104,  0.2560, -0.5952,
            0.1382,  0.5395,  0.5382, -0.1924, -0.7564,  0.2685,  0.0344,
            0.3644, -0.0186, -0.2015, -0.0436, -0.4374, -0.6968, -0.3950,
```

```
          -0.0436, -0.3336, -0.3418, -0.2233,  0.0342,  0.5604,  0.1580,
          -0.2762,  0.2895, -0.5349,  0.1523,  0.0265,  0.3010, -0.4670,
          -0.1290,  0.2832,  0.0791,  0.0822,  0.3604,  0.1194,  0.7130,
          -0.3511, -0.1112,  0.3997,  0.1846,  0.0318,  0.9138,  0.4212,
           0.6566,  0.5879,  0.1282, -0.6316, -0.1575,  0.0975, -0.2525,
           0.4322,  0.0520, -0.3366,  0.0493,  0.2680,  0.4882, -0.6680,
           0.0445,  0.0455]],

        [[ 0.2546,  0.7501,  0.6714,  0.2281, -0.0509, -0.5007,  0.0051,
           0.6868,  0.2477, -0.5065,  0.2859, -0.2440,  0.2792, -0.2422,
           0.6276, -0.4859,  0.4662,  0.5029, -0.6191,  0.7748, -0.4526,
          -0.5085, -0.6838, -0.7698,  0.2199, -0.7207,  0.3161, -0.3371,
           0.3181,  0.6219,  0.0430,  0.6152,  0.5207, -0.8552,  0.1083,
          -0.3072, -0.5140,  0.2463,  0.0955, -0.0149,  0.3858,  0.0760,
          -0.1180, -0.0329,  0.4396, -0.4899, -0.4729, -0.0806,  0.7230,
           0.3702,  0.1893, -0.6043,  0.5026,  0.0707, -0.5879,  0.6097,
          -0.1934,  0.3787,  0.7189, -0.1899,  0.5573, -0.3513, -0.7590,
          -0.0943, -0.0350, -0.0096, -0.0957,  0.0776,  0.0900,  0.3299,
           0.0389, -0.2118,  0.4019,  0.0159, -0.3000, -0.6469, -0.6892,
           0.3226,  0.4660,  0.1365,  0.6282, -0.6687, -0.4159,  0.6305,
           0.0706,  0.2726,  0.0709,  0.7349,  0.1179,  0.0702, -0.5294,
          -0.6073, -0.4781,  0.6818,  0.6582, -0.8873,  0.1352,  0.3865,
           0.4507,  0.1178]],

        [[-0.2015, -0.6769, -0.0590,  0.6375, -0.2931,  0.0945, -0.0661,
          -0.0696, -0.1478,  0.4412, -0.0295,  0.0946,  0.1168,  0.0622,
           0.0106, -0.7558,  0.4331, -0.0907,  0.2805, -0.1632, -0.4053,
          -0.7821, -0.2662,  0.0715, -0.1044, -0.6325,  0.5794,  0.3851,
           0.2793,  0.1588,  0.5838,  0.4926,  0.6545,  0.1637, -0.3910,
           0.0258,  0.0997, -0.2131, -0.6057, -0.4706,  0.7584,  0.2904,
          -0.2655, -0.3028,  0.1992,  0.1286,  0.3797, -0.7464,  0.0511,
           0.0491,  0.1652,  0.2421,  0.0881,  0.6127,  0.1363, -0.4002,
           0.0776,  0.2283,  0.2150,  0.5623,  0.1691,  0.2943, -0.4322,
           0.5799, -0.3357,  0.2781,  0.3840,  0.3162, -0.4196, -0.7347,
           0.4674,  0.4041, -0.2388, -0.2627,  0.5110, -0.6529,  0.2162,
          -0.3610, -0.2309,  0.1868,  0.4333, -0.0570, -0.1878, -0.3197,
          -0.1176, -0.1347, -0.5789, -0.4709,  0.3440, -0.2862,  0.1037,
          -0.6260,  0.7429, -0.2509,  0.3613,  0.5531, -0.7558, -0.1911,
           0.6173,  0.6466]]]): {'counter': 1, 'recent': True}},
ModuleLearner(name='modulelearner', fullname='IL/word/output/
modulelearner'): tensor([[[-0.5647, -0.9174, -0.3462,  0.4140,  0.3777,
0.3137, -0.5815,
           0.4018,  0.4440,  0.7136,  0.6462, -0.5458, -0.2854, -0.2415,
           0.2826,  0.0881,  0.5776,  0.0897,  0.4398, -0.2875, -0.4864,
           0.1264,  0.4127, -0.4005, -0.4388, -0.4255,  0.3032,  0.5643,
          -0.3382,  0.5245,  0.5295,  0.6634, -0.3066,  0.5190, -0.0719,
```

```
  -0.3011, -0.0598,  0.1207,  0.0248,  0.7067, -0.2743,  0.4763,
   0.0849,  0.7273, -0.6031, -0.4073,  0.3097,  0.5713,  0.1126,
  -0.4329, -0.1603, -0.5367, -0.0700, -0.4860, -0.5355, -0.4338,
   0.4812, -0.1141,  0.2867,  0.2315, -0.0476, -0.4892,  0.8659,
   0.1463, -0.2521, -0.5669, -0.3549, -0.1153,  0.1840, -0.1538,
  -0.2471,  0.1190, -0.5869,  0.2794,  0.7373, -0.0051, -0.2022,
  -0.6148, -0.0683, -0.4684,  0.1566,  0.7773,  0.0383, -0.3204,
  -0.4937,  0.4730, -0.2643, -0.7382,  0.6449,  0.5790, -0.4383,
   0.1281,  0.2645,  0.0120, -0.3579, -0.0595,  0.3221, -0.6708,
   0.0636, -0.4506]],

[[ 0.1176, -0.0265,  0.4157,  0.5188, -0.2767, -0.6351,  0.5222,
   0.5221, -0.6258,  0.1285, -0.0047,  0.0326,  0.2129, -0.1072,
  -0.2200, -0.2056,  0.7299, -0.1149,  0.4280, -0.0537, -0.1961,
   0.0227,  0.1415, -0.3378, -0.3906, -0.0583, -0.0149, -0.2206,
   0.0565, -0.4822, -0.3246, -0.5573, -0.2363, -0.2001, -0.2562,
   0.2685,  0.0092, -0.3589, -0.3232, -0.1981, -0.2366, -0.1998,
  -0.4239, -0.2825,  0.0317, -0.0162,  0.5221, -0.0948,  0.2677,
  -0.7733, -0.6913,  0.0270, -0.3493, -0.0385, -0.0502,  0.3391,
  -0.0334, -0.6605, -0.5908, -0.1287,  0.2281,  0.7163, -0.4613,
  -0.0147,  0.1864,  0.4960,  0.1655,  0.0109, -0.5809,  0.7831,
   0.0314, -0.1486, -0.3157,  0.5482,  0.5680,  0.1560, -0.7233,
   0.2412,  0.4217, -0.3141, -0.4727, -0.5293, -0.2279,  0.3419,
   0.5124, -0.2481,  0.3036,  0.1861, -0.2835, -0.4180,  0.1760,
   0.2913,  0.0226,  0.1762,  0.1077, -0.1689, -0.8643,  0.3530,
  -0.1705,  0.4328]],

[[ 0.7214, -0.2968, -0.0877,  0.5973,  0.5533,  0.3787, -0.5352,
  -0.0513, -0.0608,  0.4993, -0.0984,  0.1059, -0.4236, -0.1874,
   0.0845, -0.5552, -0.5669, -0.6663, -0.1576, -0.6505,  0.0417,
  -0.0287,  0.1185, -0.1258,  0.1301, -0.2580, -0.1748, -0.3623,
   0.3499,  0.1540, -0.1759, -0.1094,  0.5752,  0.4120,  0.0733,
   0.8565, -0.0205,  0.2498,  0.2331,  0.2104,  0.2560, -0.5952,
   0.1382,  0.5395,  0.5382, -0.1924, -0.7564,  0.2685,  0.0344,
   0.3644, -0.0186, -0.2015, -0.0436, -0.4374, -0.6968, -0.3950,
  -0.0436, -0.3336, -0.3418, -0.2233,  0.0342,  0.5604,  0.1580,
  -0.2762,  0.2895, -0.5349,  0.1523,  0.0265,  0.3010, -0.4670,
  -0.1290,  0.2832,  0.0791,  0.0822,  0.3604,  0.1194,  0.7130,
  -0.3511, -0.1112,  0.3997,  0.1846,  0.0318,  0.9138,  0.4212,
   0.6566,  0.5879,  0.1282, -0.6316, -0.1575,  0.0975, -0.2525,
   0.4322,  0.0520, -0.3366,  0.0493,  0.2680,  0.4882, -0.6680,
   0.0445,  0.0455]],

[[ 0.2546,  0.7501,  0.6714,  0.2281, -0.0509, -0.5007,  0.0051,
   0.6868,  0.2477, -0.5065,  0.2859, -0.2440,  0.2792, -0.2422,
   0.6276, -0.4859,  0.4662,  0.5029, -0.6191,  0.7748, -0.4526,
```

```
          -0.5085, -0.6838, -0.7698,  0.2199, -0.7207,  0.3161, -0.3371,
           0.3181,  0.6219,  0.0430,  0.6152,  0.5207, -0.8552,  0.1083,
          -0.3072, -0.5140,  0.2463,  0.0955, -0.0149,  0.3858,  0.0760,
          -0.1180, -0.0329,  0.4396, -0.4899, -0.4729, -0.0806,  0.7230,
           0.3702,  0.1893, -0.6043,  0.5026,  0.0707, -0.5879,  0.6097,
          -0.1934,  0.3787,  0.7189, -0.1899,  0.5573, -0.3513, -0.7590,
          -0.0943, -0.0350, -0.0096, -0.0957,  0.0776,  0.0900,  0.3299,
           0.0389, -0.2118,  0.4019,  0.0159, -0.3000, -0.6469, -0.6892,
           0.3226,  0.4660,  0.1365,  0.6282, -0.6687, -0.4159,  0.6305,
           0.0706,  0.2726,  0.0709,  0.7349,  0.1179,  0.0702, -0.5294,
          -0.6073, -0.4781,  0.6818,  0.6582, -0.8873,  0.1352,  0.3865,
           0.4507,  0.1178]],

        [[-0.2015, -0.6769, -0.0590,  0.6375, -0.2931,  0.0945, -0.0661,
          -0.0696, -0.1478,  0.4412, -0.0295,  0.0946,  0.1168,  0.0622,
           0.0106, -0.7558,  0.4331, -0.0907,  0.2805, -0.1632, -0.4053,
          -0.7821, -0.2662,  0.0715, -0.1044, -0.6325,  0.5794,  0.3851,
           0.2793,  0.1588,  0.5838,  0.4926,  0.6545,  0.1637, -0.3910,
           0.0258,  0.0997, -0.2131, -0.6057, -0.4706,  0.7584,  0.2904,
          -0.2655, -0.3028,  0.1992,  0.1286,  0.3797, -0.7464,  0.0511,
           0.0491,  0.1652,  0.2421,  0.0881,  0.6127,  0.1363, -0.4002,
           0.0776,  0.2283,  0.2150,  0.5623,  0.1691,  0.2943, -0.4322,
           0.5799, -0.3357,  0.2781,  0.3840,  0.3162, -0.4196, -0.7347,
           0.4674,  0.4041, -0.2388, -0.2627,  0.5110, -0.6529,  0.2162,
          -0.3610, -0.2309,  0.1868,  0.4333, -0.0570, -0.1878, -0.3197,
          -0.1176, -0.1347, -0.5789, -0.4709,  0.3440, -0.2862,  0.1037,
          -0.6260,  0.7429, -0.2509,  0.3613,  0.5531, -0.7558, -0.1911,
           0.6173,  0.6466]]]), Property(name='output', fullname='IL/
word/output'): tensor([[[-0.5647, -0.9174, -0.3462,  0.4140,  0.3777,
0.3137, -0.5815,
           0.4018,  0.4440,  0.7136,  0.6462, -0.5458, -0.2854, -0.2415,
           0.2826,  0.0881,  0.5776,  0.0897,  0.4398, -0.2875, -0.4864,
           0.1264,  0.4127, -0.4005, -0.4388, -0.4255,  0.3032,  0.5643,
          -0.3382,  0.5245,  0.5295,  0.6634, -0.3066,  0.5190, -0.0719,
          -0.3011, -0.0598,  0.1207,  0.0248,  0.7067, -0.2743,  0.4763,
           0.0849,  0.7273, -0.6031, -0.4073,  0.3097,  0.5713,  0.1126,
          -0.4329, -0.1603, -0.5367, -0.0700, -0.4860, -0.5355, -0.4338,
           0.4812, -0.1141,  0.2867,  0.2315, -0.0476, -0.4892,  0.8659,
           0.1463, -0.2521, -0.5669, -0.3549, -0.1153,  0.1840, -0.1538,
          -0.2471,  0.1190, -0.5869,  0.2794,  0.7373, -0.0051, -0.2022,
          -0.6148, -0.0683, -0.4684,  0.1566,  0.7773,  0.0383, -0.3204,
          -0.4937,  0.4730, -0.2643, -0.7382,  0.6449,  0.5790, -0.4383,
           0.1281,  0.2645,  0.0120, -0.3579, -0.0595,  0.3221, -0.6708,
           0.0636, -0.4506]],

        [[ 0.1176, -0.0265,  0.4157,  0.5188, -0.2767, -0.6351,  0.5222,
```

```
   0.5221, -0.6258,  0.1285, -0.0047,  0.0326,  0.2129, -0.1072,
  -0.2200, -0.2056,  0.7299, -0.1149,  0.4280, -0.0537, -0.1961,
   0.0227,  0.1415, -0.3378, -0.3906, -0.0583, -0.0149, -0.2206,
   0.0565, -0.4822, -0.3246, -0.5573, -0.2363, -0.2001, -0.2562,
   0.2685,  0.0092, -0.3589, -0.3232, -0.1981, -0.2366, -0.1998,
  -0.4239, -0.2825,  0.0317, -0.0162,  0.5221, -0.0948,  0.2677,
  -0.7733, -0.6913,  0.0270, -0.3493, -0.0385, -0.0502,  0.3391,
  -0.0334, -0.6605, -0.5908, -0.1287,  0.2281,  0.7163, -0.4613,
  -0.0147,  0.1864,  0.4960,  0.1655,  0.0109, -0.5809,  0.7831,
   0.0314, -0.1486, -0.3157,  0.5482,  0.5680,  0.1560, -0.7233,
   0.2412,  0.4217, -0.3141, -0.4727, -0.5293, -0.2279,  0.3419,
   0.5124, -0.2481,  0.3036,  0.1861, -0.2835, -0.4180,  0.1760,
   0.2913,  0.0226,  0.1762,  0.1077, -0.1689, -0.8643,  0.3530,
  -0.1705,  0.4328]],

[[ 0.7214, -0.2968, -0.0877,  0.5973,  0.5533,  0.3787, -0.5352,
  -0.0513, -0.0608,  0.4993, -0.0984,  0.1059, -0.4236, -0.1874,
   0.0845, -0.5552, -0.5669, -0.6663, -0.1576, -0.6505,  0.0417,
  -0.0287,  0.1185, -0.1258,  0.1301, -0.2580, -0.1748, -0.3623,
   0.3499,  0.1540, -0.1759, -0.1094,  0.5752,  0.4120,  0.0733,
   0.8565, -0.0205,  0.2498,  0.2331,  0.2104,  0.2560, -0.5952,
   0.1382,  0.5395,  0.5382, -0.1924, -0.7564,  0.2685,  0.0344,
   0.3644, -0.0186, -0.2015, -0.0436, -0.4374, -0.6968, -0.3950,
  -0.0436, -0.3336, -0.3418, -0.2233,  0.0342,  0.5604,  0.1580,
  -0.2762,  0.2895, -0.5349,  0.1523,  0.0265,  0.3010, -0.4670,
  -0.1290,  0.2832,  0.0791,  0.0822,  0.3604,  0.1194,  0.7130,
  -0.3511, -0.1112,  0.3997,  0.1846,  0.0318,  0.9138,  0.4212,
   0.6566,  0.5879,  0.1282, -0.6316, -0.1575,  0.0975, -0.2525,
   0.4322,  0.0520, -0.3366,  0.0493,  0.2680,  0.4882, -0.6680,
   0.0445,  0.0455]],

[[ 0.2546,  0.7501,  0.6714,  0.2281, -0.0509, -0.5007,  0.0051,
   0.6868,  0.2477, -0.5065,  0.2859, -0.2440,  0.2792, -0.2422,
   0.6276, -0.4859,  0.4662,  0.5029, -0.6191,  0.7748, -0.4526,
  -0.5085, -0.6838, -0.7698,  0.2199, -0.7207,  0.3161, -0.3371,
   0.3181,  0.6219,  0.0430,  0.6152,  0.5207, -0.8552,  0.1083,
  -0.3072, -0.5140,  0.2463,  0.0955, -0.0149,  0.3858,  0.0760,
  -0.1180, -0.0329,  0.4396, -0.4899, -0.4729, -0.0806,  0.7230,
   0.3702,  0.1893, -0.6043,  0.5026,  0.0707, -0.5879,  0.6097,
  -0.1934,  0.3787,  0.7189, -0.1899,  0.5573, -0.3513, -0.7590,
  -0.0943, -0.0350, -0.0096, -0.0957,  0.0776,  0.0900,  0.3299,
   0.0389, -0.2118,  0.4019,  0.0159, -0.3000, -0.6469, -0.6892,
   0.3226,  0.4660,  0.1365,  0.6282, -0.6687, -0.4159,  0.6305,
   0.0706,  0.2726,  0.0709,  0.7349,  0.1179,  0.0702, -0.5294,
  -0.6073, -0.4781,  0.6818,  0.6582, -0.8873,  0.1352,  0.3865,
   0.4507,  0.1178]],
```

```
        [[-0.2015, -0.6769, -0.0590,  0.6375, -0.2931,  0.0945, -0.0661,
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           0.0106, -0.7558,  0.4331, -0.0907,  0.2805, -0.1632, -0.4053,
          -0.7821, -0.2662,  0.0715, -0.1044, -0.6325,  0.5794,  0.3851,
           0.2793,  0.1588,  0.5838,  0.4926,  0.6545,  0.1637, -0.3910,
           0.0258,  0.0997, -0.2131, -0.6057, -0.4706,  0.7584,  0.2904,
          -0.2655, -0.3028,  0.1992,  0.1286,  0.3797, -0.7464,  0.0511,
           0.0491,  0.1652,  0.2421,  0.0881,  0.6127,  0.1363, -0.4002,
           0.0776,  0.2283,  0.2150,  0.5623,  0.1691,  0.2943, -0.4322,
           0.5799, -0.3357,  0.2781,  0.3840,  0.3162, -0.4196, -0.7347,
           0.4674,  0.4041, -0.2388, -0.2627,  0.5110, -0.6529,  0.2162,
          -0.3610, -0.2309,  0.1868,  0.4333, -0.0570, -0.1878, -0.3197,
          -0.1176, -0.1347, -0.5789, -0.4709,  0.3440, -0.2862,  0.1037,
          -0.6260,  0.7429, -0.2509,  0.3613,  0.5531, -0.7558, -0.1911,
           0.6173,  0.6466]]]), 'Counter/IL/word/<label>/
modulelearner-1': {tensor([[[ 0.8651, -0.8370, -1.1022, -0.5595,
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           0.1647, -0.5859, -0.0128, -0.3165,  0.2497, -0.6697, -0.3953,
           0.3121,  0.0669, -0.7234, -0.0572,  0.3460, -0.0994, -0.0839,
          -0.4617]],

        [[-0.1248,  0.7966, -0.0825, -0.1492,  0.2987,  0.0200, -0.8902,
          -1.3239,  0.5318,  0.2055, -0.3890, -0.1369, -0.2255,  0.5927,
           0.2473, -0.3197,  0.2356, -0.1838,  0.4011,  0.2945, -0.3229,
           0.3750]],

        [[ 0.7259,  0.0919, -0.6471, -0.4827, -0.5706,  1.3799,  0.1556,
           0.3839,  0.0344,  0.2245, -0.3579,  0.1177, -0.2030, -0.5705,
          -0.0503,  0.6394,  0.1455, -0.0655, -0.3522, -0.3745, -0.3249,
          -0.5850]],

        [[-0.2811,  0.5503,  0.7632, -0.0203, -0.0216, -0.3503, -0.0708,
           0.6798,  0.7018, -0.2929,  2.1900, -0.3037,  0.1351,  0.0667,
          -0.5245, -0.1018,  0.1850, -0.4095,  0.3898,  0.0927, -0.4615,
           0.2337]],

        [[-0.5167, -0.1227, -0.2023, -0.5109,  0.0633, -0.2841,  0.4118,
           0.8687, -0.1536,  1.0992, -0.2749, -0.2858,  0.2386,  0.0690,
          -0.1182, -0.1780, -1.0614, -0.1543, -0.2983,  0.1727, -0.4157,
          -0.0573]]]): {'counter': 1, 'recent': True}},
ModuleLearner(name='modulelearner-1', fullname='IL/word/<label>/
modulelearner-1'): tensor([[[ 0.8651, -0.8370, -1.1022, -0.5595,
-0.8057,  0.2948,  2.7732,
           0.1647, -0.5859, -0.0128, -0.3165,  0.2497, -0.6697, -0.3953,
           0.3121,  0.0669, -0.7234, -0.0572,  0.3460, -0.0994, -0.0839,
```

```
          -0.4617]],

        [[-0.1248,  0.7966, -0.0825, -0.1492,  0.2987,  0.0200, -0.8902,
          -1.3239,  0.5318,  0.2055, -0.3890, -0.1369, -0.2255,  0.5927,
           0.2473, -0.3197,  0.2356, -0.1838,  0.4011,  0.2945, -0.3229,
           0.3750]],

        [[ 0.7259,  0.0919, -0.6471, -0.4827, -0.5706,  1.3799,  0.1556,
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          -0.0503,  0.6394,  0.1455, -0.0655, -0.3522, -0.3745, -0.3249,
          -0.5850]],

        [[-0.2811,  0.5503,  0.7632, -0.0203, -0.0216, -0.3503, -0.0708,
           0.6798,  0.7018, -0.2929,  2.1900, -0.3037,  0.1351,  0.0667,
          -0.5245, -0.1018,  0.1850, -0.4095,  0.3898,  0.0927, -0.4615,
           0.2337]],

        [[-0.5167, -0.1227, -0.2023, -0.5109,  0.0633, -0.2841,  0.4118,
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          -0.1182, -0.1780, -1.0614, -0.1543, -0.2983,  0.1727, -0.4157,
          -0.0573]]]), 'CounterGetDataNode': 2}
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Word: word 0
Word label attributes: tensor([[ 0.8651, -0.8370, -1.1022, -0.5595,
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         -0.5859, -0.0128, -0.3165,  0.2497, -0.6697, -0.3953,  0.3121,
0.0669,
         -0.7234, -0.0572,  0.3460, -0.0994, -0.0839, -0.4617]])
Argmax: 6
Expected Label: 6
Word: word 1
Word label attributes: tensor([[-0.1248,  0.7966, -0.0825, -0.1492,
0.2987,  0.0200, -0.8902, -1.3239,
          0.5318,  0.2055, -0.3890, -0.1369, -0.2255,  0.5927,  0.2473,
-0.3197,
          0.2356, -0.1838,  0.4011,  0.2945, -0.3229,  0.3750]])
Argmax: 1
Expected Label: 13
Word: word 2
Word label attributes: tensor([[ 0.7259,  0.0919, -0.6471, -0.4827,
-0.5706,  1.3799,  0.1556,  0.3839,
          0.0344,  0.2245, -0.3579,  0.1177, -0.2030, -0.5705, -0.0503,
0.6394,
          0.1455, -0.0655, -0.3522, -0.3745, -0.3249, -0.5850]])
Argmax: 5
Expected Label: 5
```

```
Word: word 3
Word label attributes: tensor([[-0.2811,  0.5503,  0.7632, -0.0203,
-0.0216, -0.3503, -0.0708,  0.6798,
          0.7018, -0.2929,  2.1900, -0.3037,  0.1351,  0.0667, -0.5245,
-0.1018,
          0.1850, -0.4095,  0.3898,  0.0927, -0.4615,  0.2337]])
Argmax: 10
Expected Label: 10
Word: word 4
Word label attributes: tensor([[-0.5167, -0.1227, -0.2023, -0.5109,
0.0633, -0.2841,  0.4118,  0.8687,
         -0.1536,  1.0992, -0.2749, -0.2858,  0.2386,  0.0690, -0.1182,
-0.1780,
         -1.0614, -0.1543, -0.2983,  0.1727, -0.4157, -0.0573]])
Argmax: 9
Expected Label: 9
Word results: [7, 12, 6, 14, 7, 21, 2, 6, 12, 9, 10, 7, 9, 6, 18, 0, 10,
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21, 9, 8, 6, 19, 9, 7, 12, 9, 4, 7, 19, 0, 7, 12, 0, 8, 6, 1, 19, 0, 8,
15, 1, 16, 11, 14, 6, 21, 1, 2, 4, 7, 9, 16, 9, 10, 1, 12, 15, 21, 2, 4,
1, 15, 7, 21, 9, 10, 7, 16, 6, 12, 2, 10, 6, 19, 5, 6, 12, 9, 14, 6, 15,
4, 7, 12, 0, 18, 0, 10, 1, 19, 5, 7, 21, 9, 10, 1, 7, 11, 7, 0, 14, 1,
12, 2, 6, 16, 0, 8, 1, 2, 1, 9, 10, 7, 0, 7, 21, 2, 14, 1, 16, 7, 21, 9,
10, 7, 11, 6, 19, 9, 4, 6, 18, 0, 10, 21, 15, 1, 1, 15, 14, 21, 0, 21,
15, 4, 1, 15, 1, 6, 4, 18, 11, 7, 12, 6, 14, 1, 12, 2, 1, 6, 14, 1, 0,
7, 16, 5, 14, 7, 9, 21, 9, 8, 6, 19, 6, 10, 7, 2, 1, 16, 15, 14, 6, 19,
12, 9, 8, 6, 19, 11, 6, 21, 9, 8, 6, 18, 6, 19, 15, 10, 6, 16, 21, 6,
10, 21, 2, 7, 19, 0, 10, 7, 1, 16, 2, 14, 6, 16, 0, 1, 19, 15, 4, 7, 9,
6, 8, 1, 11, 15, 4, 6, 12, 15, 16, 5, 10, 6, 19, 5, 16, 5, 14, 21, 9, 1,
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2, 10, 7, 7, 15, 7, 19, 11, 8, 7, 9, 6, 1, 6, 14, 7, 21, 15, 10, 11, 6,
18, 0, 10, 6, 19, 6, 19, 2, 10, 7, 11, 6, 1, 5, 10, 9]
Word Labels: [7, 12, 11, 14, 7, 21, 2, 6, 12, 9, 10, 16, 9, 6, 18, 0,
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1, 0, 14, 1, 0, 7, 16, 5, 14, 12, 9, 21, 9, 8, 5, 19, 11, 10, 7, 2, 1,
16, 15, 14, 6, 12, 12, 9, 8, 6, 13, 11, 6, 21, 9, 8, 6, 16, 6, 19, 15,
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6, 19, 11, 4, 6, 16, 2, 21, 11, 10, 6, 12, 9, 6, 2, 8, 1, 19, 7, 18, 0,
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8, 1, 13, 5, 12, 11, 10, 7, 19, 15, 12, 15, 14, 6, 19, 7, 16, 11, 8, 1,
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11, 8, 12, 9, 6, 13, 11, 14, 7, 21, 15, 10, 11, 6, 18, 0, 10, 6, 13, 6,
19, 2, 10, 19, 11, 6, 13, 5, 10, 9]
Final model accuracy is : 0.870242214532872

In [2]:
```