

# Evaluating 24-7 services from Tutor.com

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In October and November of 2004, L-net accepted a free trial of 24-7 services from Tutor.com. The agreement has been that Oregon librarians will cover our chat reference desk during our normal working hours, Mon-Fri, 10am-6pm and Tutor.com's *Librarians by Request* service will cover it evenings, early mornings and weekends.

In order to decide whether or not we should contract with Tutor.com to help make L-net a 24-7 chat service, we asked four questions:

Is 24-7 important to our patrons?

What time of the day do patrons ask chat questions?

Are Tutor.com librarians as professional as Oregon librarians?

Can we afford it?

## Summary recommendations

We have found that offering a 24/7 live chat service is important to our patrons. Other statewide chat services that are offering 24-7 service are among the most successful, including Colorado's AskColorado!, Maryland's Maryland Ask Us Now! and New Jersey's QANDANJ.

We have found that the hours for which chat reference services are in demand extend beyond the hours that Oregon libraries have been willing and able to staff L-net. Even if Oregon libraries could be convinced to offer chat reference services mornings, evenings and weekends, we still may not be able to meet the demand for chat reference service when it is needed.

We have found that Tutor.com librarians provide an acceptable level of service but are concerned that we be able to identify egregiously bad transcripts from Tutor.com and Oregon librarian staff.

We have found that we can afford to contract for 24/7 services if we squeeze our budget very tightly.

## Is 24-7 important to our patrons?

We normally collect data about our patrons' experiences by offering a pop-up exit survey at the end of their chat session. In order to find out if 24-7 chat service was important to our patrons, we modified this survey on November 3, 2004 to include the question,

Are you more or less likely to use this service, now that it is available 24 hours a day, 7 days a week?

We offered the patron the following answer choices:

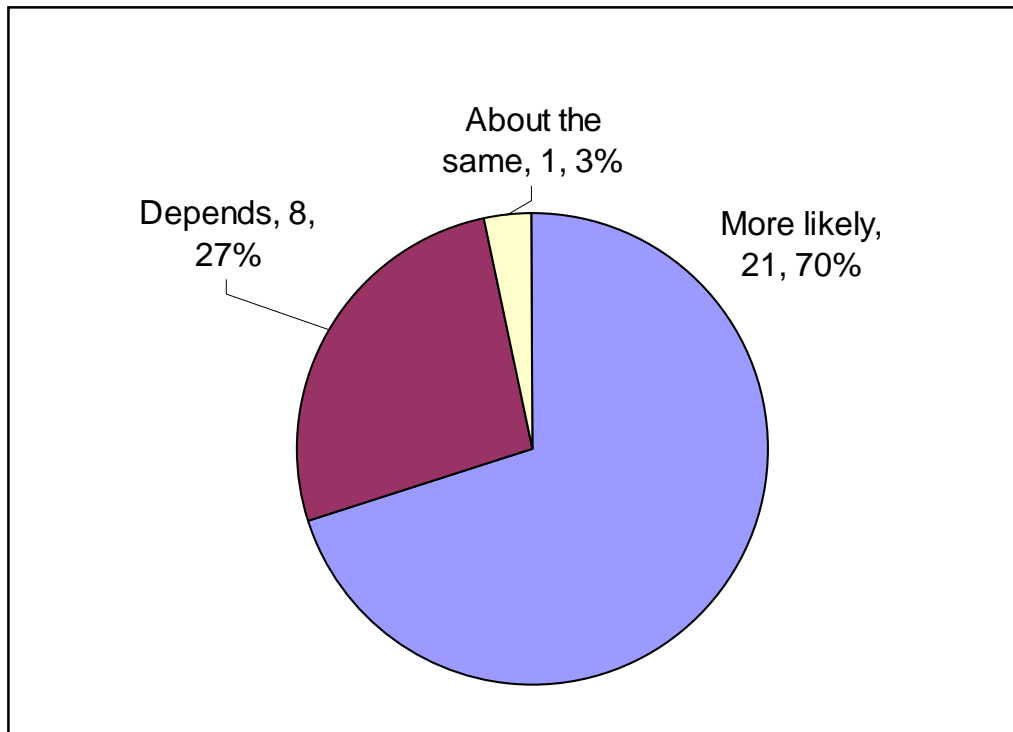
- More likely
- Less likely
- About the same
- It depends on when I need help

As of November 15, 2004, we have received 30 responses to this question, representing 9.5% of the 315 chat sessions in the period from Nov. 3-Nov. 15, 2004. The response rate seems very low, and we will find out if there are any technical problems in launching the survey.

21 of the 30 respondents said that having the service be available 24-7 would make them more likely to use the service and 8 of the remaining 9 said that it depended on when they needed help.

It is clear that having the service be available is important to our patrons.

**Chart 1: Patron response to the question, “Are you more or less likely to use this service, now that it is available 24 hours a day, 7 days a week?”**



## What time of the day do patrons ask chat questions?

Oregon librarians are staffing the L-net chat service from 10am-6pm, Monday-Friday.

### ***Percentage of questions during proposed service hours***

Of 876 chat sessions occurring between Oct 1, and Nov 14, 2004, 435 (49.7%) have come in when an Oregon librarian is staffing the service.

In order to connect our patrons with an Oregon librarian more often, we would have to increase our hours of service.

**Table 1: Hours of service and the percent of questions they would cover.**

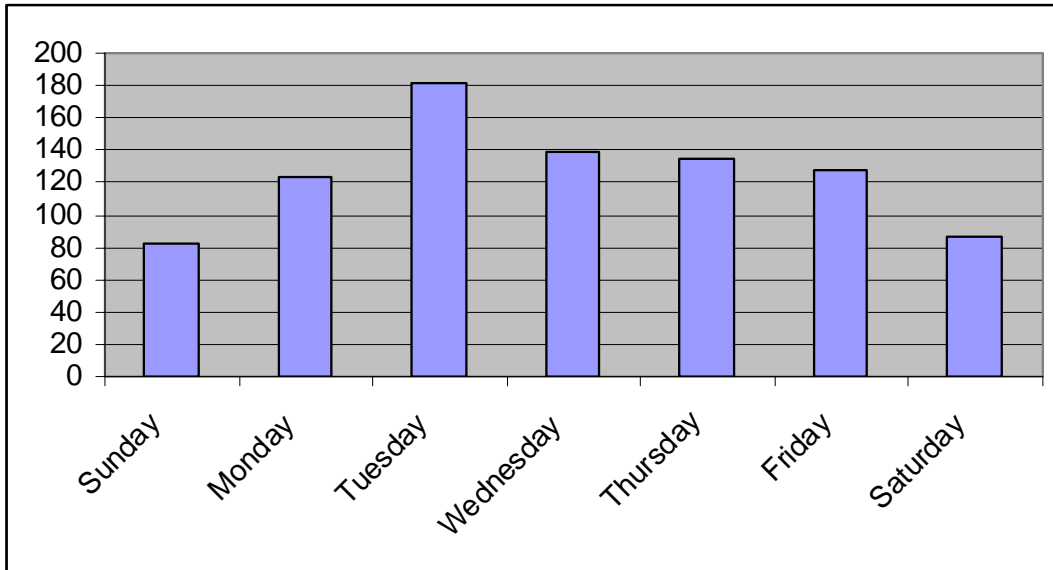
<b>Hours</b>	<b>% of questions</b>
10am-6pm, Monday- Friday (Current)	49.7
9am-7pm, Monday-Friday	60.8
9am-9pm, Monday-Friday	69.5
8am-10pm, Monday-Friday	74.9

Before 8am and after 10pm, the percentage of questions coming in each hour is less than 2% of the total. Each hour on the weekend also accounts for less than 2% of the total.

Similar statewide services, Colorado's AskColorado! and Maryland's Ask Us Now! Report heavy usage on Sunday afternoons, which something we have not experienced yet but can expect in the future.

## Actual usage by day, all hours

Chart 2: Total chat sessions by day



Day	Total Sessions
Sunday	82
Monday	124
Tuesday	182
Wednesday	139
Thursday	135
Friday	127
Saturday	87
Total	876

Table 2: Total chat sessions by day.

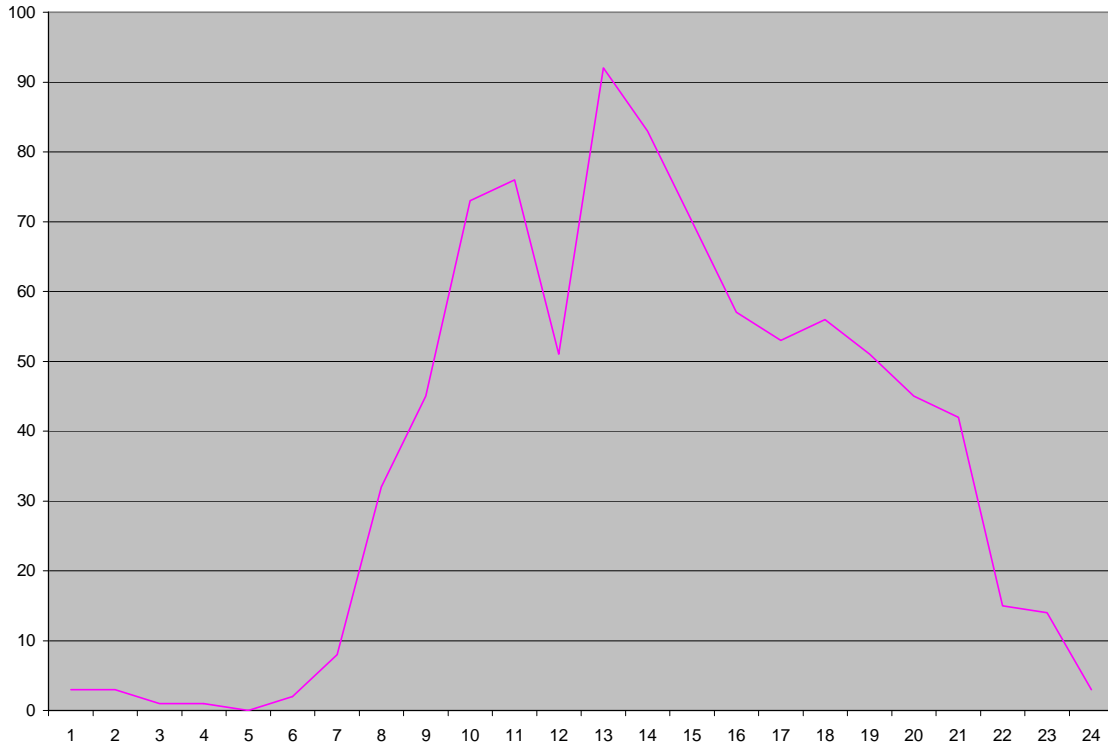
Tuesdays show the heaviest usage so far, with 182 sessions, with other weekdays getting only 124-139 sessions so far. Weekend days have gotten 82 and 87 sessions.

This pattern is slightly different than what we have seen in the past, when usage would drop off more sharply on Fridays.

The availability of the service in the morning and the marketing we have done should account for this difference.

## Actual usage by hour, all days

Chart 3: Total chat sessions by hour



Hour	Count	Hour	Count
Midnight	3	Noon	92
1am	3	1pm	83
2am	1	2pm	70
3am	1	3pm	57
4am	0	4pm	53
5am	2	5pm	56
6am	8	6pm	51
7am	32	7pm	45
8am	45	8pm	42
9am	73	9pm	15
10am	76	10pm	14
11am	51	11pm	3

**Table 3: Total chat sessions by hour.**

Demand for chat reference service is significant from 7am until 9pm.

In the past, very few Oregon libraries could be found to staff the L-net chat reference service after the hour of 6pm or on weekends. Many libraries simply are not open after this time.

## Are Tutor.com librarians as professional as Oregon librarians?

To measure whether Tutor.com's *Librarians By Request* service performed as well as Oregon librarians, we evaluated a week's worth of chat reference transcripts from Tutor.com and Oregon librarians. Evaluators from Jackson County Library Services, the Eugene Public Library and Multnomah County Library participated in this process.

In the spring of 2004, L-net's assessment team worked with staff from 8 libraries to evaluate transcripts and create a benchmark for librarian performance using criteria derived from our Service Guidelines ([http://www.oregonlibraries.net/staff/docs/service\\_guidelines.shtml](http://www.oregonlibraries.net/staff/docs/service_guidelines.shtml)).

For our October, 2004 evaluation of Tutor.com and Oregon librarians, we modified the measures slightly by removing an ambiguous one and adding one concerning the use of reference sources.

The measures we used for the October, 2004 evaluation are posted in a worksheet form at <http://www.oregonlibraries.net/staff/docs/evaluate20041102.shtml>. In addition to checking the transcript for compliance with each guideline, the evaluators marked one or more categories for the transcript, marking it as *Reference*, *Local Service Question*, *Dropped*, *Follow-up*, *Librarian Busy*, *Technical Problem*, *Prank*, or *Test*.

To be fair in the evaluation process, we did not tell the evaluators whether the transcript was from a Tutor.com librarian or an Oregon librarian. Each transcript was evaluated and the identity of the librarian was later extrapolated from reports in our Virtual Reference Toolkit software.

We then compared how well Tutor.com librarians performed to how well Oregon librarians performed, and also how well each group compared to our earlier benchmark.

### **February, 2004 Benchmark Results**

The original benchmark we created in the spring of 2004 based on data from 2 weeks of transcripts from February, 2004 showed that librarians met our service guidelines 62.4% of the time in applicable situations.

For reference sessions only, librarians met our service guidelines 63.3% of the time in applicable situations.

For local service questions only, librarians met our service guidelines 75.8% of the time.

On our transcript evaluation form, each measure is put under a group header, these are **Behavior Guidelines** (measures 1-2), **RUSA Guidelines** (3-9), **Digital Reference Guidelines** (10-15) and **Conditional Situations** (16-19).

For our benchmark, Oregon librarians performed best in measures for conditional situations, where incorrect and correct responses were clear.

We also performed well in Digital Reference Guidelines and Behavior Guidelines, scoring above average on most measures except #13, *The librarian offered or provided some instructional guidance, including the search process or strategy.*

We performed less well for RUSA Guidelines, scoring below average for each measure except #3, *The librarian signaled an initial understanding of the patron's needs.*

This suggests that librarians were comfortable using the software, but not in applying reference techniques to the chat environment.

## **October, 2004 Results**

### **Comparison by category**

We found it useful to remove dropped calls and pranks from our analysis, as these could skew our results and we wanted to look at librarians working under normal circumstances.

We compared results for the overall group, Tutor.com librarians and Oregon librarians for All questions, questions excluding dropped calls and pranks, reference questions alone and local service questions alone.

Because each transcript may fit more than one category, there is some overlap between local service and reference questions.

The **percent** and **median** columns represent the percentage of transcripts for each category where the librarian satisfied a measure when a measure was applicable. Thus, if a measure was marked 'not applicable' for a transcript, that transcript was not counted in the total.

The **percent** represents the percentage of the time where a librarian met any measure, encompassing all measures from all transcripts in that result set and category.

Each transcript was scored separately, so the **median** represents the median score for each result group.

**Table 4: Number of sessions, number of times a librarian met a measure, did not meet a measure, a measure was not applicable, the percentage of times the librarian met an applicable measure and the median score for transcripts in each group of results, by category of transcripts.**

<b>All</b>	<b>Sessions</b>	<b>Yes</b>	<b>No</b>	<b>n/a</b>	<b>Percent</b>	<b>Median</b>
Oregon	60	405	222	513	64.6%	73.3%
Tutor	71	501	298	550	62.7%	66.7%
Overall	131	906	520	1063	63.5%	70.7%

<b>Excluding prank and dropped calls</b>	<b>Sessions</b>	<b>Yes</b>	<b>No</b>	<b>n/a</b>	<b>Percent</b>	<b>Median</b>
Oregon	45	354	177	324	66.7%	73.0%
Tutor.com	56	449	263	352	63.1%	66.7%
Overall	101	803	440	676	64.6%	69.0%

<b>Reference</b>	<b>Sessions</b>	<b>Yes</b>	<b>No</b>	<b>n/a</b>	<b>Percent</b>	<b>Median</b>
Oregon	35	290	150	225	65.9%	71.4%
Tutor.com	46	372	222	280	62.6%	66.7%
Overall	81	662	372	505	64.0%	66.7%

<b>Local</b>	<b>Sessions</b>	<b>Yes</b>	<b>No</b>	<b>n/a</b>	<b>Percent</b>	<b>Median</b>
Oregon	9	63	32	76	66.3%	75.0%
Tutor.com	12	90	53	85	62.9%	64.0%
Overall	21	153	85	161	64.3%	64.3%

For each comparison, Oregon librarians performed consistently better than Tutor.com librarians. At the same time, the difference in scoring for most measures was not significant. The exception was that median score on Oregon librarians’ transcripts of local library questions was 11% better than the median score of Tutor.com librarians’ transcripts for the same category.

Except for the local service question’s overall result set, the median is consistently higher than the percent, suggesting that a few bad transcripts have brought down the average score of the group.

### **Comparison by measure**

We also compared each measure across our sets of results (Benchmark, October, Tutor.com librarians and Oregon librarians). The percentage indicated in each box indicates the percentage of times a measure was met when it was applicable.

The **Benchmark** set of results is along the top row for each measure. It is marked in black. For each measure, results are marked in black if that result set scored higher than the benchmark set and in are marked in red if that result set scored lower than the benchmark.

Between the Oregon and Tutor result sets, one is marked in **bold** for each measure, indicating which group scored higher.

A benchmark was not created for measure 20, *The librarian was knowledgeable about appropriate and age-sensitive reference sources for this question* because it was not part of the original evaluation.

**Table 5: Percentage of times a librarian met a measure, when applicable, for each result set**

<b>Category</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Benchmark	63.8%	84.1%	68.5%	41.6%	52.0%	55.9%	53.9%
October, 2004	66.1%	85.7%	72.4%	33.7%	58.3%	47.5%	50.0%
Tutor	<b>66.1%</b>	82.9%	68.8%	30.5%	57.1%	43.8%	48.6%
Oregon	66.0%	<b>89.3%</b>	<b>76.9%</b>	<b>38.1%</b>	<b>60.0%</b>	<b>53.1%</b>	<b>51.9%</b>
<b>Category</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>
Benchmark	55.0%	80.2%	81.0%	87.0%	31.7%	67.7%	61.1%
October, 2004	38.5%	81.1%	83.8%	86.9%	30.8%	62.9%	72.3%
Tutor	35.7%	76.8%	<b>84.5%</b>	<b>89.5%</b>	<b>31.4%</b>	60.0%	<b>80.4%</b>
Oregon	<b>41.7%</b>	<b>87.2%</b>	83.0%	84.0%	30.0%	<b>66.7%</b>	62.2%
<b>Category</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>		
Benchmark	100.0%	59.1%	76.5%	42.9%	n/a		
October, 2004	80.0%	45.5%	25.0%	18.2%	68.7%		
Tutor	<b>100.0%</b>	<b>50.0%</b>	<b>40.0%</b>	14.3%	<b>71.4%</b>		
Oregon	0.0%	40.0%	0.0%	<b>25.0%</b>	65.6%		

Oregon librarians scored higher than Tutor.com librarians on 10 of the 19 measures. The greatest margin of difference between the two groups was for measure 10 (10.4%) and 19 (10.7%). There is nothing to suggest that Tutor.com librarians are significantly worse than Oregon librarians at providing chat reference service.

There are enough bad transcripts to be concerned that we be able to identify and report them to Tutor.com, but not enough to write off the service entirely. To be certain, there are some examples of transcripts from both Tutor.com and Oregon librarians.

Results are similar to that of our benchmark in that librarians scored lower on those measures derived from the Guidelines for Behavioral Performance of Reference and Information Service Providers (<http://www.ala.org/ala/rusa/rusaprotools/referenceguide/guidelinesbehavioral.htm>).

## **Measures for which Tutor.com and Oregon librarians scored about the same (within 5%)**

- (1) The librarian engaged in a reference interview.
- (5) The librarian asked open-ended questions to encourage the patron to expand the request or present additional information.
- (7) The librarian broke the search query into specific facets.
- (11) The librarian and the patron maintained a two-sided conversation.
- (13) The librarian offered or provided some instructional guidance, including the search process or strategy.

## **Measures for which Oregon librarians scored better than Tutor.com librarians**

- (2) The librarian chatted in a friendly and professional manner, e.g., avoided jargon and refrained from interjecting value judgments about the nature of the question.
- (3) The librarian signaled an initial understanding of the patron's needs.
- (4) The librarian rephrased the patron's questions to encourage the patron to expand the request or present additional information.
- (6) The librarian used closed and/or clarifying questions to refine the search query or to clarify confusing terminology.
- (9) The librarian encouraged the patron to contribute ideas while searching.
- (10) The librarian sent messages to the patron between sending web pages.
- (14) The librarian fully cited resources, unless authorship was otherwise indicated. (Web pages pushed do not need to be cited).
- (19) If the librarian was too busy to take the call right away, the question was referred.

## **Measures for which Tutor.com librarians scored better than Oregon librarians**

- (12) The librarian sent information in small pieces.

- (15) The patron indicated satisfaction before the librarian ended the call.
- (16) Legal, medical and statistical information was not interpreted.
- (17) Questions requiring detailed information from the patron's "home" library were referred.
- (18) Questions requiring detailed information from an in-depth resource unavailable to the librarian were referred.
- (20) The librarian was knowledgeable about appropriate and age-sensitive reference sources for this question

### **Can we afford it?**

Launching a 24/7 service was not budgeted in this year's grant for Oregon's statewide digital reference service. Funds were budgeted to help provide off-peak service, but not nearly enough to cover the cost of going 24/7, even though the current quote from Tutor.com is a very low price.

In order to ensure the best possible price in future grant cycles, we could make 24/7 service a required component of an RFP for our software vendor.

A process for an RFP for software and services will be initiated early this spring in preparation for a new grant cycle in mid-2005.

**Transcript no.**

**Categories:**  Reference Question  Local Service Question  Dropped  Follow-up  Librarian Busy  
 Technical Problem  Prank  Test

#	Yes	No	n/a	Behavior Guidelines
1				The librarian engaged in a reference interview.
2				The librarian chatted in a friendly and professional manner, e.g. avoided jargon and refrained from interjecting value judgements about the nature of the question.
#	Yes	No	n/a	RUSA Guidelines for Behavioral Performance...
3				The librarian signaled an initial understanding of the patron's needs. (2.4)
4				The librarian rephrased the patron's question or request and asks for confirmation to ensure that it is understood. (3.4)
5				The librarian asked open-ended questions to encourage the patron to expand the request or present additional information. (3.5)
6				The librarian used closed and/or clarifying questions to refine the search query or to clarify confusing terminology. (3.6)
7				The librarian broke the search query into specific facets. (4.0)
9				The librarian encouraged the patron to contribute ideas while searching. (4.10)
#	Yes	No	n/a	Digital Reference Guidelines
10				The librarian sent messages to the patron between sending web pages.
11				The librarian and patron maintained a two-sided conversation.
12				The librarian sent information in small pieces.
13				The librarian offered or provided some instructional guidance, including the search process or strategy.
14				The librarian fully cited resources, unless authorship was otherwise indicated. (Web pages pushed do not need to be cited).
15				The patron indicated satisfaction before the librarian ended the call.
#	Yes	No	n/a	Conditional situations
16				Legal, medical and statistical information was not interpreted.
17				Questions requiring detailed information from the patron's "home" library were referred.
18				Questions requiring detailed information from an in-depth resource unavailable to the librarian were referred.
19				If the librarian was too busy to take the call right away, the question was referred.
#	Yes	No	n/a	Sources
20				The librarian was knowledgeable about appropriate and age-sensitive reference sources for this question.
				<b>Totals</b>

Please write any additional comments on the back of this sheet.