Perception vs. Acceptability of TM and NMT Output: What do translators prefer?

Pilar Sánchez-Gijón
Grup Tradumàtica
Dept. de Traducció i d'Interpretació i d'Estudis de l'Àsia Oriental
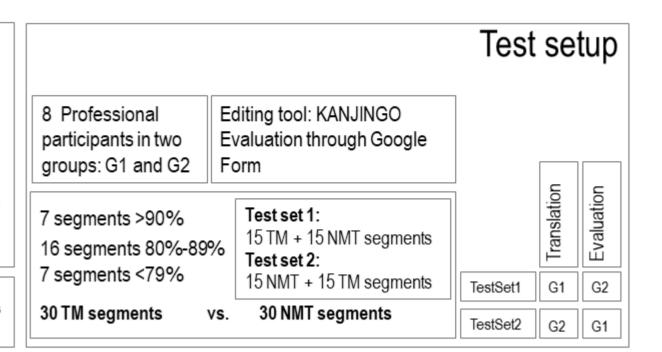Universitat Autònoma de Barcelona
pilar.sanchez.gijon@uab.cat

Joss Moorkens
ADAPT Centre
School of Applied Languages and Intercultural Studies
Dublin City University
joss.moorkens@dcu.ie

Andy Way
ADAPT Centre
School of Computing
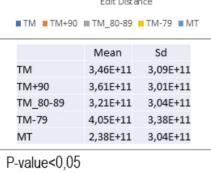Dublin City University
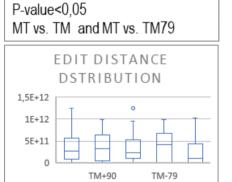andy.way@dcu.ie

Research questions

1. Is NMT editing less productive than TM editing?
2. Does translators' perception of NMT and TM validity and their editing performance converge?
3. Does their general perception of their productivity with MT converge with their real productivity?
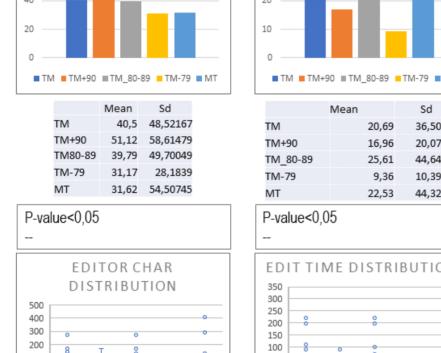
Test setup

8 Professional participants in two groups: G1 and G2

Editing tool: KANJINGO
Evaluation through Google Form

7 segments >90%
16 segments 80%-89%
7 segments <79%

30 TM segments   vs.   30 NMT segments

Test set 1:
15 TM + 15 NMT segments

Test set 2:
15 NMT + 15 TM segments

	Translation	Evaluation
TestSet1	G1	G2
TestSet2	G2	G1

1. Is NMT editing less productive than TM editing?

Edit Distance Mean

	Mean	Sd
TM	3,46E+11	3,09E+11
TM+90	3,61E+11	3,01E+11
TM_80-89	3,21E+11	3,04E+11
TM-79	4,05E+11	3,38E+11
MT	2,38E+11	3,04E+11

P-value<0,05
MT vs. TM and MT vs. TM79

Editor Char Mean

	Mean	Sd
TM	40,5	48,52167
TM+90	51,12	58,61479
TM80-89	39,79	49,70049
TM-79	31,17	28,1839
MT	31,62	54,50745

P-value<0,05
--

Edit Time Mean

	Mean	Sd
TM	20,69	36,50984
TM+90	16,96	20,07154
TM-79	25,61	44,64779
TM-79	9,36	10,39458
MT	22,53	44,32933

P-value<0,05
--

▷ MT edit distance mean is significantly smaller than TM.
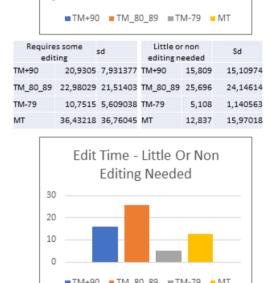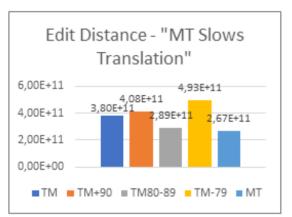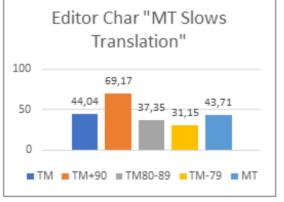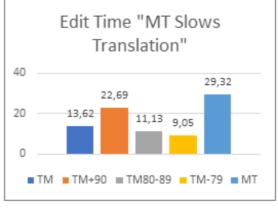▷ MT edit distance mean is significantly smaller than TM-79.

2. Does translators' perception of NMT and TM validity and their editing performance converge?

	Requires some editing	Sd		Little or non editing needed	Sd
TM+90	4,23E+11	1,37E+11	TM+90	2,93E+11	1,26E+11
TM80_89	2,01E+11	1,36E+11	TM80_89	3,50E+11	1,49E+11
TM-79	4,97E+11	3,22E+11	TM-79	3,20E+11	1,90E+11
MT	3,25E+11	1,97E+11	MT	1,75E+11	1,64E+11

	Requires some editing	Sd		Little or non editing needed	Sd
TM+90	83,50	53,52362	TM+90	23,60	15,7086
TM_80-89	50,03	39,51834	TM_80-89	37,10	30,33883
TM-79	39,25	26,731	TM-79	19,33	9,899495
MT	50,09	53,29151	MT	20,96	19,47411

	Requires some editing	sd		Little or non editing needed	Sd
TM+90	20,9305	7,931377	TM+90	15,809	15,10974
TM_80-89	2,01E+11	21,51403	TM_80-89	25,696	24,14614
TM-79	10,7515	5,609038	TM-79	5,108	1,140563
MT	36,43218	36,76045	MT	12,837	15,97018

▷ MT editing performance is significantly smaller than TM 80-89 editing performance.

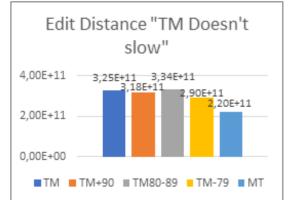## 3. Does their general perception of their productivity with MT converge with their real productivity?
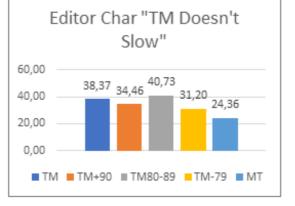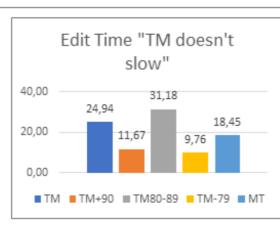

Edit Distance - "MT Slows Translation": 3,80E+11; 4,08E+11; 2,89E+11; 4,93E+11; 2,67E+11

Editor Char "MT Slows Translation": 44,04; 69,17; 37,35; 31,15; 43,71

Edit Time "MT Slows Translation": 13,62; 22,69; 11,13; 9,05; 29,32

⬆ I think MT slows me down when I translate. ⬆
⬇ I think MT doesn't slow me down when I translate. ⬇

Edit Distance "TM Doesn't slow": 3,25E+11; 3,18E+11; 3,34E+11; 2,90E+11; 2,20E+11

Editor Char "TM Doesn't Slow": 38,37; 34,46; 40,73; 31,20; 24,36

Edit Time "TM doesn't slow": 24,94; 11,67; 31,18; 9,76; 18,45

▷ MT edit distance of translators who think that MT slows them down is significantly smaller than their TM-79 edit distance.

▷ MT edit distance of translators who think that MT doesn't slow them down is significantly smaller than their TM and TM80-89 edit distance.

▷ MT editor char of translators who think that MT doesn't slow them down is significantly smaller than their TM and TM80-89 editor char.