

## **BURCU DEMIRAY, Ph.D.**

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University of Zurich, Department of Psychology  
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### **Professional Positions**

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2013 -	<b>Research Group Leader “ Semantic Activity Analytics for Healthy Aging”, University of Zurich</b> Department of Psychology, Chair of Gerontopsychology* University Research Priority Program “Dynamics of Healthy Aging”
2019 -	<b>Research Fellow, University of Zurich</b> Digital Society Initiative, Challenge Area “Health”
2018 -	<b>Senior Research Fellow, University of Zurich – ETH - ZHdK</b> Collegium Helveticum, Project Coordinator “Semantic Health Text Analytics”
2011 - 2013	<b>Postdoctoral Researcher, University of Zurich</b> Department of Psychology, Chair of Developmental Psychology: Adulthood* Advisor: Prof. Alexandra Freund

### **Education**

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2010	<b>University of Florida, Gainesville</b> Ph.D. in Developmental Psychology, Advisor: Prof. Susan Bluck Dissertation “ <i>Autobiographical memory and psychological well-being in young adulthood and midlife</i> ”
2006	<b>Koç University, Istanbul</b> M.A. in Developmental Psychology, Language of Instruction: English
2004	<b>Koç University, Istanbul</b> B.A. in Psychology, Language of Instruction: English

### **Grants and Fellowships**

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2012 - present	University of Zurich, Founder and Leader of Peer-Mentoring Group “ <i>Statistical Analyses with R Language</i> ” (33,500 Swiss Francs)
2014	Swiss National Science Foundation International Research Visit Fund (visited University of Arizona)
2013-2014	University of Zurich, Competitive Research Innovation Fund PI for Project “ <i>Functional approach to memory and well-being across the adult lifespan</i> ” (65,641 Swiss Francs)
2012-2013	Suzanne and Hans Biäsch Foundation, Competitive Applied Psychology Fund PI for Project “ <i>Ecological approach to autobiographical memory and well-being in the context of healthy aging</i> ” (36,540 Swiss Francs)
2007-2010	University of Florida, College of Liberal Arts and Sciences Grinter Fellowship (merit-based)
2010	University of Florida The Jacquelin Goldman Summer Fellowship (merit-based)

\* Employment at 75%.

Maternity leave: Feb 2015 – Oct 2015.

Reduced employment (60%): Nov 2015 – Nov 2017.

## Honors & Awards

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2019	Vontobel Foundation <b>Vontobel Award for Research on Age and Aging</b> (12,500 Swiss Francs)
2011	The Gerontological Society of America <b>Behavioral &amp; Social Sciences Best Dissertation Award (2011)</b>
2010	University of Florida, Gainesville <b>Ferguson Memorial Award</b> (merit-based)
2009	University of Florida, Gainesville <b>Best Dissertation Award</b> from the Psychology Department
2007-2009	University of Florida, Gainesville <b>Travel Award</b> from Graduate Student Council & Department of Psychology <b>Travel Award</b> from College of Liberal Arts and Sciences
2006	The Society for Applied Research in Memory and Cognition, USA <b>Travel award</b>
2005	New Bulgarian University, Sofia, Bulgaria Selected for the International Summer School in Cognitive Science with <b>Full scholarship</b>
2004-2006	Koç University, Istanbul <b>Full scholarship: MA Program in Developmental Psychology</b>
2001-2004	Koç University, Istanbul <b>Dean's Honor Roll:</b> based on academic excellence and GPA

## Publications (\* = Student co-author)

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Brianza, E. \* & **Demiray**, B. (2019). Future time perspective and real-life utterances about the future in young and older adults. *Journal of Gerontopsychology and Geriatric Psychiatry*, 32(4), 161–173. <https://doi.org/10.1024/1662-9647/a000216>

**Demiray**, B., Luo, M. \*, Tejada-Padron, A. & Mehl, M. R. (in press). Sounds of healthy aging: Assessing everyday social and cognitive activity from ecologically sampled ambient audio data. In P. Hill & M. Allemand (Eds.), *Personality and Healthy Aging in Adulthood: New Directions and Techniques*. Springer.

Luo, M. \*, Robbins, M., Martin, M., **Demiray**, B. (2019). Real-life language use across different interlocutors: A naturalistic observation study of adults varying in age. *Frontiers in Psychology*. DOI: 10.3389/fpsyg.2019.01412

Luo, M. \*, Schneider, G., Martin, M., & **Demiray**, B. (2019). Cognitive aging effects on language use in real-life contexts: A naturalistic observation study. In A.K. Goel, C.M. Seifert, & C. Freksa (Eds.), *Proceedings of the 41st Annual Conference of the Cognitive Science Society* (pp. 714-720). Montreal, QB: Cognitive Science Society. Retrieved from <https://mindmodeling.org/cogsci2019/papers/0140/index.html> (Acceptance rate: 25 %)

Lind, M., **Demiray**, B., & Bluck, S. (2019). Identifying distinct sets of predictors of specific functions of autobiographical memory. *Memory*. <https://doi.org/10.1080/09658211.2019.1639759>

Wolf, T., & **Demiray**, B. (2019). The mood-enhancement function of autobiographical memories: Comparisons with other functions in terms of emotional valence. *Consciousness and Cognition*, *70*, 88-100.

Ece, B., **Demiray**, B., Öner, S., & Gülgöz, S. (2019). Comparison of earliest and later autobiographical memories in young and middle-aged adults. *Studies in Psychology*, *39*(1), 1-34.

**Demiray**, B., Mehl, M. R., & Martin, M. (2018). Conversational time travel: Evidence of a retrospective bias in real life conversations. *Frontiers in Psychology*.  
<https://doi.org/10.3389/fpsyg.2018.02160>.

Ece, B., **Demiray**, B., & Gülgöz, S. (2018). Consistency of adults' earliest memories across two years. *Memory*, *27*(1), 28-37.

**Demiray**, B., Mischler, M. \*, & Martin, M. (2017). Reminiscence in everyday conversations: A naturalistic observation study of older adults. *The Journals of Gerontology: Series B*.  
<https://doi.org/10.1093/geronb/gbx141>

**Demiray**, B., & Freund, A. M. (2017). The psychological distance of memories: Examining causal relations with mood and self-esteem in young, middle-aged and older adults. *Consciousness and Cognition*, *49*, 117-131.

**Demiray**, B., & Freund, A. M. (2015). Michael Jackson, Bin Laden and I: Functions of positive and negative, public and private flashbulb memories. *Memory*, *23*(4), 487-506.

**Demiray**, B., & Janssen, S. M. J. (2015). The self-enhancement function of autobiographical memory. *Applied Cognitive Psychology*, *29*(1), 49-60.

Maki, Y., Kawasaki, Y., **Demiray**, B., & Janssen, S. M. J. (2015). Autobiographical memory functions in young Japanese men and women. *Memory*, *23* (1), 11-24.

**Demiray**, B., & Bluck, S. (2014). Time since birth and time left to live: Opposing forces in constructing psychological well-being. *Ageing and Society*, *34*(07), 1193-1218.

**Demiray**, B., & Bluck, S. (2011). Relation of the conceptual self to recent and distant autobiographical memories. *Memory*, *19* (8), 975-992.

Bluck, S., Alea, N., & **Demiray**, B. (2010). You get what you need: The psychosocial functions of remembering. In J. Mace (Ed.), *The act of remembering: Toward an understanding of how we recall the past* (pp. 284–307). UK: Blackwell Publishing Ltd.

**Demiray**, B., Gülgöz, S., & Bluck, S. (2009). Examining the life story account of the reminiscence bump: Why we remember more from young adulthood. *Memory*, *17*, 708-723.

#### Methodological papers

Yordanova, K., **Demiray**, B., Mehl, M. R., & Martin, M. (2019). Automatic detection of everyday social behaviors and environments from verbatim transcripts of daily conversations. *IEEE International Conference on Pervasive Computing and Communications (PerCom 2019)*. (Acceptance rate: 16 %)

Hernandez, N., **Demiray**, B., Arnrich, B., & Favela, J. (2019). An exploratory study to detect temporal orientation using bluetooth's sensor. *In the 13th International Conference on Pervasive Computing Technologies for Healthcare (PervasiveHealth '19)*, May 20–23, 2019, Trento, Italy.

Londral, A., **Demiray**, B., & Cheetham, M. (2018). Quantification of the Voicescape: A person-centric approach to describing real-life behavior patterns: A case study comparing two age groups. In *Proceedings of the 11th International Joint Conference on Biomedical Engineering Systems and Technologies (BIOSTEC)* - Volume 4: BIOSIGNALS, pages 311-314.

**Demiray**, B. (2018). Otobiyografik bellek arařtırmalarında kullanılan yöntemler ve metodolojik geliřmeler (Methods in autobiographical memory research). In S. Gülgöz, B. Ece, & S. Öner (Eds.), *Hayatı hatırlamak: Otobiyografik Belleğin Psikolojisi*. Koc University Publishing.

Hernández, N., Arnrich, B., Favela, J., Ersoy, C., **Demiray**, B., & Fontecha, J. (2017). A multi-site study on walkability, data sharing and privacy perception using mobile sensing data gathered from the mk-sense platform. *Journal of Ambient Intelligence and Humanized Computing*, 1-13. <https://doi.org/10.1007/s12652-017-0642-x>.

Hernández, N., Arnrich, B., Favela, J., Yavuz, G. R., Ersoy, C., **Demiray**, B., & Fontecha, J. (2016, January). mk-sense: An extensible platform to conduct multi-institutional mobile sensing campaigns. In *Ubiquitous Computing and Ambient Intelligence*. (pp. 207-216). DOI: 10.1007/978-3-319-48746-5\_21

Hernández, N., Yavuz, G. R., Eřrefođlu, R. M., Kepez, T. B., Özdemir, A., **Demiray**, B., Alan, H. F., Ersoy, C., Untersander, S., & Arnrich, B. (2015, December). Thought and life logging: A pilot study. In *International Conference on Ubiquitous Computing and Ambient Intelligence* (pp. 26-36). Springer International Publishing. DOI: 10.1007/978-3-319-26401-1\_3

#### Policy paper:

Martin, M., Mroczek, D. K., Clare, L., Röcke, C., Mérellat, S., & **Demiray**, B. (2017). Intrinsic capacity and functional ability: How to operationalize it through the use of individual data, criteria for measurement, data standards and use in modelling outcomes of interest, and key gaps. *Background Paper for World Health Organization (WHO) Working Group on Metrics and Research Standards in Healthy Aging*, 27-31. March, 2017, Geneva.

#### Submitted manuscripts:

Luo, M. \*, Neysari, M., Schneider, G., Martin, M., & **Demiray**, B. (under review). Effects of age and interlocutors on language use: Conflict conversations of couples varying in age.

Luo, M. \*, Debelak, R., Schneider, G., Martin, M., & **Demiray**, B. (under review). Language use with familiar versus unfamiliar interlocutors: Comparing real-world conversations in young and older adults.

Cheetham, M., **Demiray**, B., Martin, M., Battegay, E., & Londral, A. (under review). Semi-automatic human voice detection and segmentation: A method for use in behavioural speech analysis.

#### Manuscripts in preparation:

**Demiray**, B., Luo, M. \*, & Martin, M. (in preparation). People laugh more while talking about their past than their future: Functions of conversational time travel in everyday life.

### Conference presentations since 2014 (\* = Student co-author)

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Demiray, B., Luo, M. \* & Martin, M. (2019). *People laugh more while talking about their personal past than their future: Functions of conversational time travel in the real world*. Paper presented at the Society for Applied Research on Memory and Cognition, 13<sup>th</sup> Biennial Meeting, Cape Cod, USA.

Demiray, B., Luo, M. \* & Martin, M. (2019). *People laugh more while talking about their personal past than their future: Functions of conversational time travel in the real world*. Paper presented at the International Convention of Psychological Science, Paris, France.

Demiray, B., Röcke, C., Allemand, M., & Martin, M. (2019). *Automatic extraction of information on social connection from real-life audio data: Relations with well-being in late life*. Poster presented at the 5th International Conference Aging & Cognition, Zurich, Switzerland.

Luo, M. \*, Schneider, G., Martin, M., & Demiray, B. (2019). *Interlocutor effects on real-life language use in young and older adults: A naturalistic observation study*. Poster presented at the 5th International Conference Aging & Cognition, Zurich, Switzerland.

Demiray, B., Luo, M. \*, & Martin, M. (2019). *Functions of conversational time travel: A naturalistic observation study in everyday life*. In Luo, M. & Katana, M. (Chair), *Associations between real-life cognitive processes and well-being of healthy older adults*. Paper presented at the 9th International Association of Gerontology and Geriatrics, European Region Congress, Gothenburg, Sweden.

Luo, M. \*, Schneider, G., Martin, M., & Demiray, B. (2019). *Real-life language accommodation and mood: A naturalistic observation study of young and older adults*. In Luo, M. & Katana, M. (Chair), *Associations between real-life cognitive processes and well-being of healthy older adults*. Paper presented at the 9th International Association of Gerontology and Geriatrics, European Region Congress, Gothenburg, Sweden.

Luo, M. \*, Neysari, M., Schneider, G., Martin, M., & Demiray, B. (2019). *Effects of age and interlocutors on language use: Conflict conversations of couples varying in age*. Paper presented at the Corpora for Language and Aging Research (CLARe) 4, Helsinki, Finland.

Luo, M. \*, Schneider, G., Robbins, M. L., Martin, M., & Demiray, B. (2019). *Real-life language use across different interlocutors: Two naturalistic observation studies of adults varying in age*. Paper presented at the Corpora for Language and Aging Research (CLARe) 4, Helsinki, Finland.

Demiray, B., & Martin, M. (2018). *Functions of conversational time travel: A naturalistic observation study of young and older adults*. Poster presented at the Conference on Autobiographical Memory and the Self, Center on Autobiographical Memory Research, Aarhus, Denmark.

Demiray, B., & Martin, M. (2018). *Functions of conversational time travel: A naturalistic observation study of young and older adults*. Poster presented at the National Conference of the Swiss Gerontological Society, Montreux, Switzerland.

Brianza, E. \*, Demiray, B., & Martin, M. (2018). *Perceptions and utterances about the future: How are they related to life satisfaction in young and older adults?* Poster presented at the National Conference of the Swiss Gerontological Society, Montreux, Switzerland.

Luo, M. \*, Demiray, B., & Martin, M. (2018). *Real-life language use across different social contexts: A naturalistic observation study of young and older adults*. Poster presented at the National Conference of the Swiss Gerontological Society, Montreux, Switzerland.

- Demiray, B., Mehl, M., & Martin, M. (2018). *Conversational time travel in everyday life: A naturalistic observation method*. Paper presented at the 3<sup>rd</sup> International meeting of the Psychonomic Society, Amsterdam, Netherlands.
- Luo, M. \*, Demiray, B., Mehl, M. & Martin, M. (2017). *Verbal activities in the context of everyday conversations: A naturalistic observation study*. Poster presented at the 5<sup>th</sup> Biennial Conference of the Society for Ambulatory Assessment, Luxembourg.
- Demiray, B., Mehl, M., & Martin, M. (2017). *Conversational time travel in everyday life: A naturalistic observation method*. Paper presented at the 5<sup>th</sup> Biennial Conference of the Society for Ambulatory Assessment, Luxembourg.
- Demiray, B., & Martin, M. (2017). *The relation between conversational time travel and well-being: A naturalistic observation study*. Poster presented at the 4th International Conference “Aging & Cognition”, Zurich, Switzerland.
- Mischler, M. \*, Demiray, B., & Martin, M. (2017). *How older people reminisce in everyday life conversations: A naturalistic observation study*. Poster presented at the 4th International Conference “Aging & Cognition”, Zurich, Switzerland.
- Imfeld, M. \*, Demiray, B., & Martin, M. (2017). *Autobiographical memory in daily life conversations: Examining its functions and emotional characteristics in younger and older adults*. Poster presented at the 4th International Conference “Aging & Cognition”, Zurich, Switzerland.
- Ece, B., Demiray, B., & Gülgöz, S. (2016). *En eski anların yeniden hatırlanması*. Paper presented at the 19th National Congress of Psychology, İzmir, Turkey.
- Ece, B., Demiray, B., & Gülgöz, S. (2016). *Consistency of earliest memories*. Paper presented at the 6<sup>th</sup> International Conference on Memory, Budapest, Hungary.
- Demiray, B., & Martin, M. (2016). *Talking about the personal past versus future in everyday life: A naturalistic observation study*. Poster presented at the 6<sup>th</sup> International Conference on Memory, Budapest, Hungary.
- Demiray, B., & Martin, M. (2016). *Functions of recalling the past in everyday life: An experience sampling study with a focus on within-person variation*. Paper presented at the 6<sup>th</sup> International Conference on Memory, Budapest, Hungary.
- Demiray, B., & Martin, M. (2016). *Conversational Time Travel: A naturalistic observation study*. Poster presented at the Conference on Mental Time Travel, Center on Autobiographical Memory Research, Aarhus, Denmark.
- Demiray, B., Martin, M., Hernández, N., Yavuz, G., & Arnrich, B. (2016). *Within-person variability in the relation between mental time travel and mood: An experience sampling study in everyday life*. Poster presented at the Conference on Mental Time Travel, Center on Autobiographical Memory Research, Aarhus, Denmark.
- Demiray, B., Mehl, M., Arnican, A. \*, & Mischler, M. \* (2016). *How much do people talk about their personal past in everyday life? A naturalistic observation study*. Poster presented at the Swiss Society of Gerontology Conference, Fribourg, Switzerland.
- Untersander, S. \* & Demiray, B. (2015). *Reducing negative mood associated with mind wandering*. Poster presented at the 14<sup>th</sup> Congress of the Swiss Psychological Society, Geneva, Switzerland.

Demiray, B. & Bluck, S. (2014). *Using memory to maintain self-continuity: Roles of self-concept clarity and extraversion*. Poster presented at the 17<sup>th</sup> European Conference on Personality, Lausanne, Switzerland.

Demiray, B., Mehl, M. & Martin, M. (2014). *How much do people talk about their future in everyday life? A naturalistic observation study*. Poster presented at the International Conference on Prospective Memory, Naples, Italy.

Demiray, B. & Mehl, M. (2014). *How much do people talk about their personal past in everyday life? A naturalistic observation study*. Poster presented at the Swiss Society of Gerontology Conference, Fribourg, Switzerland.

### **Invited talks/Research Visits since 2014**

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Jun 2019	Tilburg University, Department of Cognitive Science & Artificial Intelligence
Oct 2018	University of Geneva, Cognitive Aging Lab
Nov 2017	University of Zurich, University Research Priority Program
Oct 2016	University of Aarhus, Center on Autobiographical Memory Research
Sep 2016	Koc University, Istanbul, Research in Applied Memory Laboratory
Aug 2014	University of Arizona, Department of Psychology
Apr 2014	Bogazici University, Computer Engineering Department, Istanbul
Mar 2014	University of Louvain, Department of Psychology, Belgium

### **Courses Taught**

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#### **University of Zurich, Psychology Department**

Spr 2020	Real-life Cognitive Activities and Healthy Aging (undergrad. seminar)
Fall 2019	Real-life Cognitive Activities and Healthy Aging (undergrad. seminar)
Spr 2018	Cognitive Activities in the Real World (undergraduate seminar)
Fall 2014	Memory in the Real World (graduate seminar)
Fall 2013	Autobiographical Memory in Late Life (graduate seminar)
Spr 2012	Autobiographical Memory Across the Life Span (undergrad. seminar)
Fall 2011	Psychology of Love (graduate seminar, co-instructor with Prof. Freund)

#### **University of Florida, Psychology Department**

Spr 2010	Research Methods in Developmental Psychology Laboratory (undergraduate)
Spr 2009	Introduction to Psychology (undergraduate)
	<u>Teaching Assistant:</u>
2010	Research Methods in Developmental Psychology (undergraduate)
2009	Introduction to Psychology (undergraduate)
2008 & 2009	Measurement, Design and Statistics I & II (graduate; elected as TA due to outstanding performance in these courses)
2007 & 2008	Developmental Psychology (undergraduate, in class & web-based)

## Koç University, Psychology Department

2005- 2006 Assistant Instructor: Introduction to Psychology (undergraduate)  
 2005 Teaching Assistant: Psychology of Testing and Measurement (undergraduate)  
 2004- 2005 Teaching Assistant: Research Methods in Psychology (undergraduate)

## Mentoring since 2014

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Ph.D. theses: Laura Minxia Luo (Defense: June 2020)

Master's theses: Sarah Untersander, Marianne Mischler, Mirjam Imfeld, Elisabeth Schoch, Caroline Winkler, Eliana Brianza

Bachelor's theses: Andra Arnican, Olenka Dworakowski, Christine Tusz, Lucas Baeriswyl, Melanie Bamert

Research interns: Annika Martin, Zoe Wälchli, Isabel Berwian, Oliver Lohse, Andra Arnican, Nathalie de Peri, Joelle Barthassat, Marion Hauert, Marianne Mischler, Martina Preisig, Leonie Pahud, Laura Nanz, Charlotte Kukowski, Melanie Bamert

## Professional service / Organizational commitment

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2020 - 2023 Member of Governing Board  
 Society for Applied Research on Memory and Cognition (SARMAC)

2020 Member of Editorial Board  
 Journal of Gerontopsychology and Geriatric Psychiatry (GeroPsych)

2019 Guest Editor, Journal of Gerontopsychology and Geriatric Psychiatry

2018 Organization/Scientific Committee of the Conference of the European Cognitive Ageing Society (EUCAS): *Ageing and Cognition Conference, 2019*

2016 - present Grant Development Support (PI: Prof. Mike Martin):  
 Competitive University Research Priority Program "Dynamics of Healthy Aging", Phase II (8 Mio Swiss Francs, 2017-2020)

National Research Program, 77 Digital Transformation (10 Mio Swiss Francs, 2019-2023)

Citizen Science Platform Zurich (1.25 Mio Swiss Francs, 2017-2020)

2015 - present MADOKO: Master's and Doctoral Students Conference, Department of Psychology, University of Zurich (Supporting students with their presentations, acting as judge for best poster prizes)

2012 - present Ad-hoc Reviewer: Psychology and Aging, Developmental Psychology, Gerontology, GeroPsych, Frontiers in Psychology, European Journal of Ageing, Aging and Mental Health, International Journal of Behavioral Development, Applied Cognitive Psychology, Memory, Emotion, Journal of Cognitive Psychology, Journal of General Psychology, Journal of Individual Differences, Journal of Happiness Studies, Journal of Social and Personal Relationships, Identity, Advances in Cognitive Psychology, PLOS ONE.



- 2012 - present      Peer-Mentoring Program, University of Zurich  
Founder and Leader of Peer-Mentoring Group “*Statistical Analyses with R*”  
(Applying for funding, leading the group, organizing statistics workshops,  
activities and meetings for group members in doctoral and postdoctoral levels)
- Sep 2010 -      Lab Manager: Koc University, Research in Applied Memory Lab, Prof. Sami  
Feb 2011      Gülgöz (Leading projects, training assistants, running meetings)
- 2009 - 2010      Lab Manager: University of Florida, Life Story Lab (Prof. Susan Bluck)  
(Recruiting assistants, training assistants, running meetings, assigning tasks)

### **Professional affiliations**

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American Psychological Association (APA)  
The Society for Applied Research in Memory and Cognition (SARMAC)  
Gerontological Society of America (GSA)  
Swiss Society of Gerontology (SGG)  
Swiss Network for Well-being and Aging

### **Languages**

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Turkish: Mother tongue  
English: Fluent  
German: Intermediate (B1 Level, TELC Certificate)