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Slide 7

¡Hola!

01

Literature Review

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Slide 8

Self-directed learning (SDL)

- SDL refers to a type of learning where individuals are in charge of the planning, implementation, and assessment of one's own learning process (Hiemstra, 1994; Loyens et al., 2008)
- SDL is a critical ability in the learning environments of this new learning age, which are often **informal, online, and open** (Bonk, 2009, 2020).
- Garrison (1997) refined SDL through three dimensions, including **self-management**, **self-monitoring**, and **motivation**.

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Garrison's (1997) Framework of SDL

- **Self-management** is the task control ability that is associated with external activities, such as time, resources, and goal management.

- **Self-monitoring** is the cognitive and metacognitive process of establishing learning strategies and learning paces.

- **Motivation** can initiate and sustain learning efforts towards cognitive goals (Garrison, 1997).

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Slide 10

SDL, CALL, and MALL

- Computer-assisted language learning (CALL) (Beatty, 2013; Levy, 1997)

- Mobile-assisted language learning (MALL) (Kukulska-Hulme & Shield, 2008; Miangah & Nezarat, 2012)

- Though research has been conducted on CALL, MALL, and self-directed language learning (SDLL) separately, the SDL perspective of using CALL and MALL out of the classroom still remains unexplored.

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Slide 11

Goal Management

- Goals specify the amount of effort required to succeed and the self-satisfaction anticipated (Schunk, 1990).

- Goal setting leads to task assessment and considerations of the appropriate learning strategies from a metacognitive perspective (Ridley et al., 1992).

- In MALL, timescales influence the dynamic nature of the learning ecology and so influence the learning goals.

- Setting realistic and achievable goals is more likely to lead to a successful SDL.

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Slide 12

Time Management

- MALL provides high flexibility of time management so that learners may coordinate their learning with personal activities at their convenience (Huang et al., 2014).

- User-friendly learning management system that explicitly indicates one's learning progress and is embedded with time control features can motivate and enhance learning (Al-Adwan et al., 2018).

- Time management can be challenged when the free learning time conflicts with other personal desires (Loewen et al., 2019).

- Learners cannot consistently learn in a MALL environment without a certain level of extrinsic incentives (Botero et al., 2019).

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Resource Management

- Both human and material resources are important component of SDL (Knowles, 1975).

- Others in a learning community can serve as important resources that support learning, including experts and more knowledgeable peers (Bonk et al., 2004; Wenger, 1998).

- The zone of proximal development (ZPD) defines the learner's ability to do something with and without external help (Vygotsky, 1978).

- Authentic resources are a crucial motivation factor in language learning (Cross 1984; Gilmore, 2007).
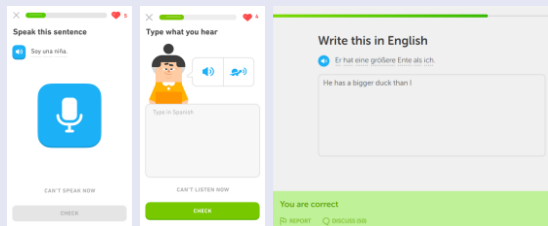
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Duolingo

- Duolingo is a **free** language-learning platform, which has become one of the most popular tools for language learning (Jašková, 2014).

- It includes a language-learning website and a mobile application, offering free lessons among **40 languages** for more than **500 million learners** (Blanco, 2021).

- Duolingo was designed to be used in the **context of a non-classroom** learning environment with the scope of "beyond the walls of the classroom" (Brebera, 2017).

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Duolingo Platform

Speak this sentence
Soy una niña.

CAN'T SPEAK NOW
CHECK

Type what you hear

CAN'T LISTEN NOW
CHECK

Write this in English
Er hat eine größere Ente als ich.

He has a bigger duck than I

You are correct
REPORT   DISCUSS

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Current Research on Duolingo

Effectiveness
(Jašková, 2014; Krashen, 2014; Vesselinov & Grego, 2012)

Gamification
(Huynh et al., 2016; Huynh & Iida, 2017; Munday, 2017; Shortt et al., 2021)

Microlearning
(Brebera, 2017)

Features
(Nushi & Eqbali, 2017; Savvani, 2018)

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02

Method

Jambo!

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Overview

- An explanatory sequential mixed methods design (Ivankova et al., 2006)

- Quantitative data collection and data analysis followed by qualitative data collection and data analysis

- 84 valid survey responses & 10 interviewees

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The explanatory-sequential approach

- Quantitative Data is analyzed by **descriptive statistics** (i.e. percentages and means) through Qualtrics
- Qualitative data is analyzed by **thematic analysis** through NVivo 12

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Participants

USA
USA
Mexico
Costa Rica
UK
Germany
China
China
Singapore
Indonesia

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Ni hao!

03

Findings

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Goal Management

- All interviewees (n=10) had goals, which can be classified into long-term outcome goals, short-term performance goals, and procedural goals.
- All three types of goals can be very specific or very vague.
- 8 interviewees have specific outcome goals, 5 of them can predict procedures that take them to the final outcome and set sub-goals.
- Learners who claim that they do not have specific goals are more likely to follow a goal generated by language learning software rather than a goal initiated by themselves.

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Goal Management

Interviewee #6

Outcome goals:
"My future goal is to get the C1 CEFR, because I must have it to enter the German university."

Short-term performance goals:
"I'm more into like in six months, I must read the complete structure (of Duolingo)."

Procedural goals:
"And it's more like I have a goal that I must complete the tree in German. So yeah, I have to make myself discipline[d]."

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Time Management

- The majority of interviewees (n=8) stated that daily life activities are a constraint to their time management.
- The significant obstacle is due to work demands, which have an impact on learners' physical and emotional ability to complete their learning goals on a consistent basis.

"Because my schedule can be busy. Sometimes, especially during the exam period in schools, I really have no time. I'm just busy completing my markings."
- **Interviewee #10**

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Time Management

- Eight interviewees (n=8) either use technology-assisted time management or a self-developed time management system to overcome time constraints.

If you have the app on your phone and you have the notification open, and you didn't finish your day, they will send at least three notifications at different times of the day to remind you to do so."
- **Interviewee #5**

"Because I was getting notified and I knew, okay, I have to do something now."
- **Interviewee #7**

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Resource Management

- **Authenticity of resources** is prioritized in language learning.
- Three primary indicators of authentic resources are **engagement of experts, realistic and meaningful learning context, and valid content.**

"Talk to somebody who's a native speaker. And then you figure out whether they understand you. And they may give some feedback like, 'Hey, Joe, you know, your language is pretty good' or they stop you every ten sections to say "no, actually, this is how you say it." Yeah. So that I think is the most valuable measure of how you're doing in a language."
- **Interviewee #9**

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Resource Management

- More than half of the interviewees (n=6) highly valued the importance of **cultural information and representations** in the various learning resources in Duolingo.

"And there's no culture. I mean, they could be like, here's a traditional Middle Eastern dish from xxx area… But then they also have sentences with people named Bob and Sam. Why? Just use all Arabic names. Like why, why people go somewhere and talk about Sam. Sam, yeah, which is Arabic, but why do I need to talk about Bob?"
- **Interviewee #7**

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04

Discussion

Hi!

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Significance of Research

01

Literature Gap

Most existing studies on MALL-based self-directed learning have been conducted in the context of formal school learning (Botero & Questier, 2016; Botero et al., 2019)

02

Practice

The COVID-19 pandemic significantly changes how people approach learning languages and various new online or blended options emerge.

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Limitations & Future Research

01

Instrument Design

The survey instrument was not originally designed for this study

02

Sample Size

500 million users
VS
84 survey participants

03

Survey Distribution

Users who uses Duolingo Event, Forum, and Discord are far more likely to observe the recruitment than those who solely use Duolingo lessons.

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