

**Self-Direct to Learn, Self-Direct to Live: Exploring Learner Choices, Experiences, and Possibilities in a Self-Directed Learning World**

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1

**December 14, 2021**  
**A Decade of MOOCs: A Review of MOOC Stats and Trends in 2021**  
Dhawal Shah, Class Central  
<https://www.classcentral.com/report/mooc-stats-and-trends-2021/>

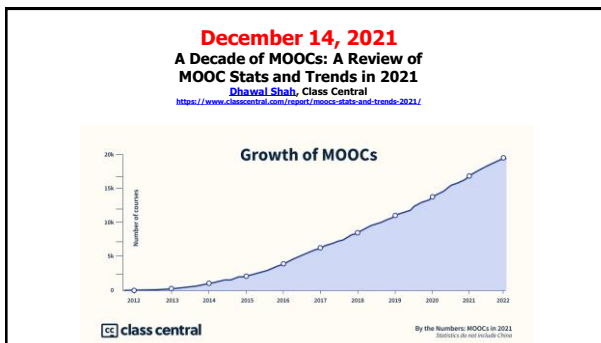
**220M** Students  
**950** Universities

**19.4k** Courses  
**1670** Microcredentials  
**70** MOOC-based degrees

**class central**

By the Numbers: MOOCs in 2021  
Statistics do not include China

2



3

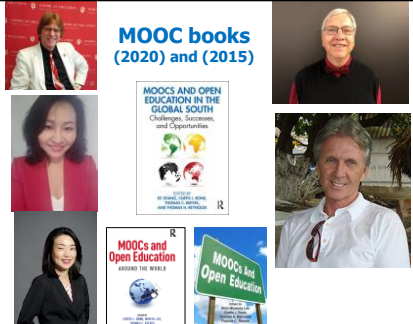
**December 14, 2021**  
**A Decade of MOOCs: A Review of MOOC Stats and Trends in 2021**  
Dhawal Shah, Class Central  
<https://www.classcentral.com/report/mooc-stats-and-trends-2021/>

New Registered Users	2019	2020	2021	Total
<b>coursera</b>	8M	31M	<b>21M</b>	97M
<b>edX</b>	5M	10M	<b>7M</b>	42M
<b>swayam</b>	NA	6M	<b>6M</b>	22M
<b>Future Learn</b>	1.3M	4M	<b>2M</b>	17M

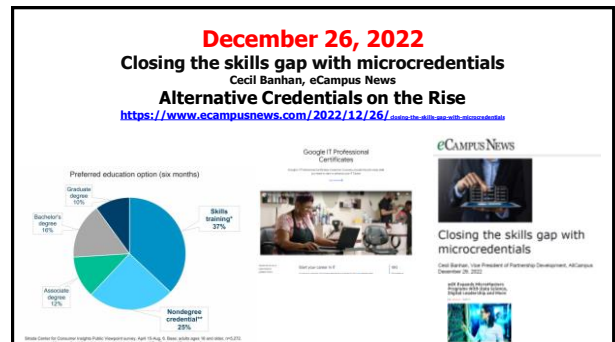
**class central**

4

**MOOC books (2020) and (2015)**



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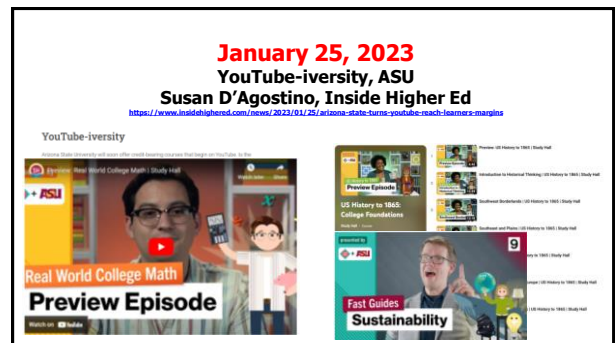
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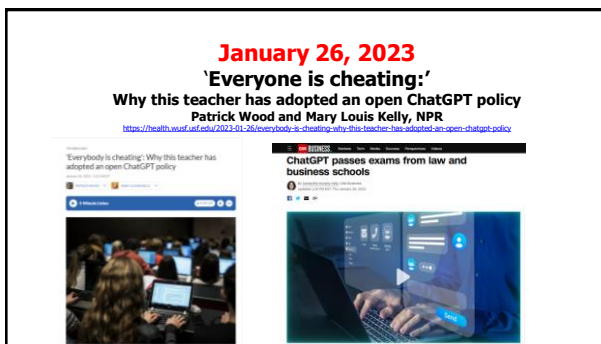
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10



11



12


**January 31, 2023**  
**What is ChatGPT? Everything to know about OpenAI's free AI essay writer and how it works**  
**Jennifer Jolly, USA Today**  
<https://www.usatoday.com/story/tech/2023/01/27/chatgpt-buzzfeed-ai/1112897002/>

**What is ChatGPT? Everything to know about OpenAI's free AI essay writer and how it works**  
 Jennifer Jolly, USA Today  
 January 27, 2023 10:00 AM ET | 10:00 AM ET



13

**December 24, 2022**  
**Using ChatGPT for Language Learning, Tom Gally**  
**Will AI change the future of language learning? | ChatGPT**  
 Grace Guo, Mandarin Chinese  
[https://www.youtube.com/watch?v=H3\\_CDYroEvU](https://www.youtube.com/watch?v=H3_CDYroEvU)



14

**October 22, 2021**  
**Wanted:**  
**Billions of Self-Directed Learners**  
<https://www.answermatters.com/tech/learning-development/the-impact-of-self-directed-learning-how-it-can-change-the-world-page-20188>



15

**Benefits of Self-Directed Learners**  
<https://discoverpraxis.com/reasons-not-to-go-to-college/>


**THE BENEFITS OF SELF-DIRECTED LEARNING**

- ✓ Teaches you to take initiative and create value
- ✓ Builds self-confidence
- ✓ Teaches perseverance and flexibility
- ✓ Kindles intrinsic motivation
- ✓ Promotes self-awareness
- ✓ Helps you find a career you find personally fulfilling
- ✓ Allows you to learn skills more holistically
- ✓ Teaches social skills
- ✓ Lets you explore a wider range of interests
- ✓ Gives you the practical experience to execute what you've learned

 PRAXIS

16

**Study #1. Nepali Youth Learn from MOOCs**




17

**The name of the Himalayan peak is Mt. Nilgiri with 7061 Meters height.**

**Bishwa Raj Gautam,**  
 Program Specialist,  
 Regional English  
 Language Office  
 (RELO), U.S. Embassy,  
 Nepal.

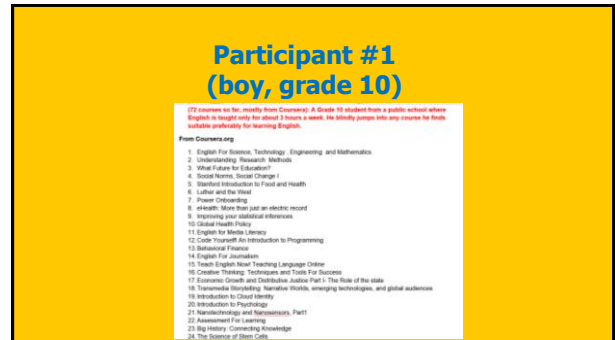
**With Baman Kumar Ghimire,**  
 Motherland  
 Secondary School,  
 Pokhara, Nepal



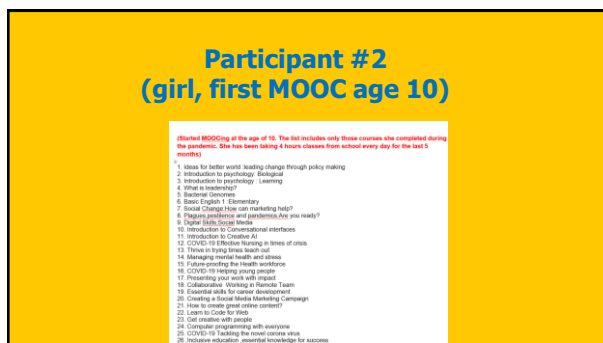
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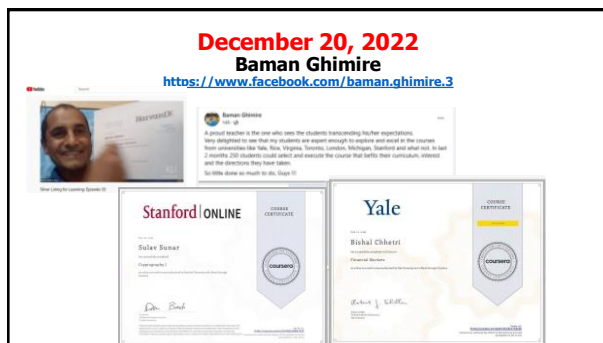
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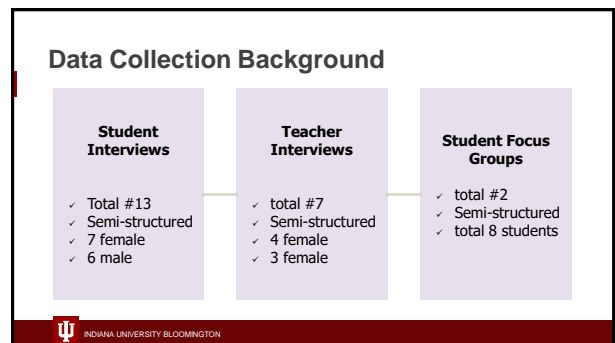
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23



24

Methods: Teacher's Perspective

## Research Questions

1. What scaffoldings and environmental cues were provided by teachers to support Nepali adolescent in enrolling and succeeding in MOOCs?
2. What are Nepali teachers' perspectives on using MOOCs as supplementary resources?



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25

## Participants

Participant	Job title	Years of using MOOCs	School Type	Number of Students Completed MOOCs
Teacher #1	Science Teacher	4 years	Private	15-20
Teacher #2	EFL Teacher	7 years	Private	more than 20
Teacher #3	EFL Teacher, Principal	3 years	Private	more than 20
Teacher #4	EFL Teacher	1 year	Private	more than 20
Teacher #5	EFL Teacher	1 month	Public school; ACCESS	2 completed
Teacher #6	EFL Teacher	1 month	Public school; ACCESS	2 completes
Teacher #7	EFL Teacher, Principal	8-9 years	Private	more than 20



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26

## Identified Themes

Sources of support | parental; teacher's fading support; external support

Teacher roles | facilitators, guides, cheerleaders

Substantial gains | teachers learning from MOOCs, benefits, positive outcomes

Strategies &amp; student initiatives | student mentors, intrinsic sources, incentives

Challenges &amp; suggestions | engaging with courses, resources, design



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27

## RQ 1

Sources of support | parental; teacher's fading support; external support

"They did on their own pace but initially **we guided them**, initially we guided them and every week what we follow up them initially but later on they did by themselves." (T#1, line-134-136)

"...**the school has been promoting these kinds of activities**, please, to let your children be with the computer. If they ask for, and it was really very difficult to convince the parents as well." (T#3, line 390-396)



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28

## RQ 1

Strategies &amp; student initiatives | student mentors, intrinsic sources, incentives

"Those students who just completed MOOC, **they are really happy got excited** here they are leading the group and they are sharing their experience." (T#4, line 588-591)

"They have shown interest in coding, and they have started now they're running coding Club in school. **And they mentor the junior those who did coding courses** and now mentoring the juniors they're supporting the juniors." (T#1, line 259-263)

"...they were quite interested, they showed their motivation in doing the courses, so we didn't have to push them. You know, **they were like motivated internally**..." (T#4, line 283-286)

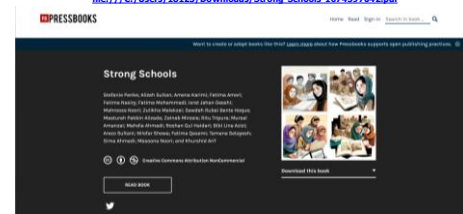


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29

## February 15, 2023 Strong Schools, Afghani Women Asian University of Women

<https://pressbooks.pub/schools/>  
file:///C:/Users/18123/Downloads/Strong-Schools-1674597042.pdf



30

## Study #2: Li & Bonk (in press CALL) Self-directed language learning in Duolingo



31

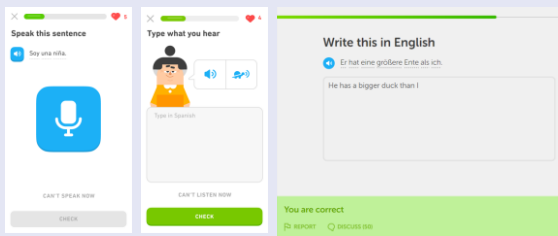
Most popular language studied on Duolingo in each country in 2021



(Blanco, 2021)

32

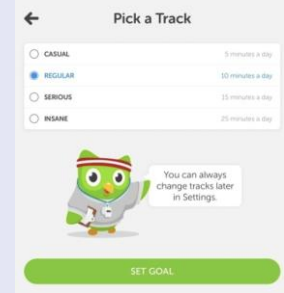
## Platform Overview



33

## Goal Setting

- Based on microlearning.
- Is goal-oriented.
- Range from 5 min/day to 20 min/day.
- Flexibility to personalized.
- Teachers may track students' performance if use "Schools"

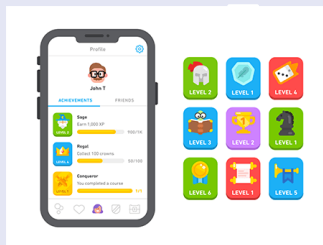


34

## Gamification

Duolingo applies **gameful learning** to **keep the learner motivated** and consistently engaged in a positive and casual learning environment.

Its learning process is structured as a learning game that has game features, such as reward, badges, and leader-board, to allow users to learn as playing.



35

## Research Questions

- **How** do Duolingo learners **self-manage** their learning goals, time, resources, and support?
- What strategies are employed by Duolingo learners to **overcome challenges and frustrations** related to learning foreign languages with Duolingo?
- **What motivating factors** underpin the decisions of learners to learn a foreign language with Duolingo?
- How does the **design and delivery** of Duolingo foster learners to be self-directed learners?

36

36

## Context of the Study

- Learning with technology (e.g., Duolingo) in an out-of-classroom context is **often challenged by the absence of instructors and lack of guidance**.
- Therefore, it demands a much **higher level of self-directed learning (SDL)** ability for the learners to be successful.
- White (1995) suggests that **learners need** to have strong **independence, autonomy, and control** to self-manage learning and make their own decisions in distance language learning.

37

## 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).

38

## Study Design

The **10 research participants** represented a wide range of age and ethnic groups.

Participants of this study were screened and identified through the previous survey that was distributed through the Duolingo forum, an online language community using Discord, as well as through postings on Facebook pages, emails, and WeChat groups. The interviewees' demographics are listed in Table 1.

Table 1. Duolingo Interviewee Demographic and Language Learning Information

Interviewee	Gender	Country	Native Language	# of years using Duolingo	Languages learned through Duolingo
P1	M	Mexico	Spanish	More than 7 years	English, French
P2	M	United States	English	1 - 3 years	Japanese
P3	F	China	Chinese	Less than 6 months	Japanese
P4	F	Costa Rica	Spanish	6 months - 1 year	Portuguese
P5	F	China	Chinese	1 - 3 years	French
P6	F	Indonesia	Indonesian	6 months - 1 year	French, German, Spanish
P7	M	Germany	German	6 months - 1 year	Chinese
P8	F	United States	English, French, Spanish	6 months - 1 year	Arabic
P9	M	United Kingdom/ Singapore	English	6 months - 1 year	Chinese, Indonesian, Spanish
P10	F	Singapore	Malay	Less than 6 months	Japanese

39

## 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.

40

## Self-management

- **Specific goals** can lead to **improved performance**, and learners' learning goals can be self-initiated or technology-defined.
- **Distractions** from daily living may **make time management difficult**, both physically and psychologically.
- A single MALL tool like **Duolingo is not enough** to master a language in all dimensions; as a result, they seek and manage **other resources** to complement their learning.
- **Both human and material resources** can be used to complement Duolingo learning.

41

## Self-management



Interviewee #2

"I think my biggest suggestion, as I mentioned a little earlier, is **just don't use Duolingo as your only resource**. Because particularly nowadays or for any language, there are so many other resources out there and there are certain things that each of them does better or worse than the others."

"My opinion on that is since Duolingo is a non-human system, I think to have a **human tutor** at the end of a section would actually be a nice relief, a nice change of pace."



Interviewee #9

42



## 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."

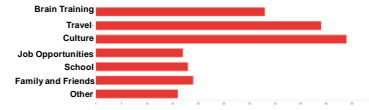
- **Interviewee #10**



## Finding: Motivation

Language learners are mostly driven by intrinsic motivators that relates to culture, travel, and brain training.

Q3. What motivated you to learn a foreign language?



44

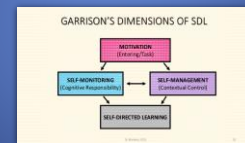
## Finding: Motivation

- The idea is that I would **really like to go to Europe someday**. (P5)
- So in the last month, the idea came up of going from Hamburg with the train to Moscow and then transit to the trains. And then make some stops in Siberia and then end at Beijing and enjoy the visit in China. (P7)
- But for people, who are more like my mother, when she talks about it, she is just like, "oh, well, I'm learning it. I don't expect to be conversational and I'm just learning it to **keep my mind sharp**." (P8)



45

## Study #3 MOOCs Instructional Design to Facilitate Participants' Self-Directed Learning



46

## Data Collections

### Survey:

- Volunteer sampling (Creswell & Clark, 2017)
- 198 instructors responded to the survey (10% response rate)

### Interview:

- Homogeneous purposeful sampling (Creswell & Clark, 2017; Patton, 2002)
- Maximal variation sampling (Creswell & Clark, 2017)
- 22 interviewees

### MOOC review:

- Reviewed 22 interviewees' MOOCs



47

Pseudonym	Country	Subject area	Platform	Gender	No. of O/S	No. of M	Mode of the M
Lucas	US	Social science	edX	M	0	1	I without T
Brandon	US	Education	Udacity	M	0	5 or more	Self-paced
Logan	US	Literacy and Language	Coursera	M	5 or more	5 or more	I with T
Emma	US	Literacy and Language	Coursera	F	2	1	Self-paced
Jason	US	Science	edX	M	1	1	I with T
Jackson	US	Medicine and health	Coursera	M	5 or more	1	Self-paced
Samuel	US	Education	FuturLearn	M	4	3	Self-paced
Hannah	US	Education	Blackboard	F	5 or more	1	I with T
Ashley	US	Education	EdX	F	0	5 or more	I with T
Andrew	UK	Art	FuturLearn	M	0	3	I with T
Emily	UK	Medicine and health	FuturLearn	F	2	2	I with T
Aiden	UK	Social science	FuturLearn	M	0	1	Self-paced
Henry	UK	Social science	FuturLearn	M	0	1	Self-paced
Joseph	UK	Medicine and health	FuturLearn	M	1	1	Self-paced
Joshua	UK	Literacy and language	FuturLearn	M	2	2	I with T
Mason	Australia	Education	Coursera	M	5 or more	1	I with T
Ethan	Australia	Business	Coursera	M	3	1	I without T
Ben	Australia	Social science	edX	M	1	1	I with T
Paul	France	Computer Science	Coursera	M	1	1	I with T
Fernando	Belgium	Research methods	Blackboard	M	5 or more	3	I with T
Jacob	Netherlands	Science	Coursera	M	0	1	I with T
Dylan	Israel	Science	Coursera	M	5 or more	3	I without T

48



## Study #4

### MOOC Learners and SDL

Zhu, M., Bonk, C. J., & Berri, S. (2022). Fostering self-directed learning in MOOCs: Motivation, learning strategies, and instruction. *Online Learning*



49

49

## Research Questions

1. What motivated individuals to enroll in MOOCs?
2. What were the learning strategies that helped learners' SDL in MOOCs?
3. What were the design and instructional elements of MOOCs that facilitated learners' SDL?

50

50

## Study #4

### MOOC Learners and SDL

Zhu, M., Bonk, C. J., & Berri, S. (2022). Fostering self-directed learning in MOOCs: Motivation, learning strategies, and instruction. *Online Learning*

Table 1

Pseudonyms	Gender	Countries	Occupations
Abdolkhan	M	Turkey	Teacher
Ali	M	Yemen	Student
Alina	F	The UK	Student
Betty	F	Albania	Engineer
Chang	M	Canada	Artist
Dan	M	Mexico	Professor
Helen	F	Indonesia	Administrative assistant
Jacob	M	The US	Retired management consultant
Janet	F	The US	Educator
Joe	M	The UK	Retired engineer
Melissa	F	Germany	Student
Monty	F	Egypt	Student
Sandy	F	The US	Student
Sarah	F	The US	Between jobs
Sophia	F	The Netherlands	Retired office manager

51

51

## RQ1. Intrinsic Motivation

Jacob, a retired management consultant from the US, expressed his motive behind enrolling in MOOCs as strictly intrinsic, "there's no reward. **I'm retired. It's really just [that] I get very interested in topics. I realize holes in my knowledge and try to fill the holes.**"

52

52

## RQ1. Extrinsic Motivation

Besides educational purposes, **some participants enrolled in MOOCs to help with their career development.** For example, Sarah, who received her Ph.D. degree and was in between jobs at the time, selected topics such as anatomy, MatLab software, oncology, biology, and neuroscience. Sarah explained the purpose for taking these types of MOOCs was:  
**To acquire and improve my knowledge as a medical physicist...I consider my resume when selecting MOOC. I choose courses related to my professional field to add them to my curriculum; otherwise, there would be a period without being in contact with my profession.**

53

53

## RQ2. Learning Strategies

### RQ2: What were the Learning Strategies that Helped Learners' SDL in MOOCs?

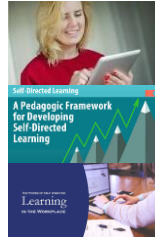
Dan considered the progress bar to be a good indication of his progress, and it also created a healthy competition among the learners. Seeing where he was at in the course compared to the other learners gave him a push. He stated, "All the progress bar with milestones, with a small quiz that doesn't count for the evaluation, but they're good for you to check if I'm really learning. And, for example, I like when you have these kinds of nice competition[s], right. Everyone starts a MOOC at the same time, but you see that these weeks you progress faster than other members in the MOOC."

54

54

### Top 10 Strategies to Facilitate SDL in MOOCs

1. Helping students set their own learning goals.
2. Building learning community.
3. Offering immediate feedback.
4. Embedding quizzes for self-assessment.
5. Providing progress indicators.
6. Providing reflection questions.
7. Designing short learning units.
8. Providing flexible timelines.
9. Highlighting estimated time frames.
10. Making available optional learning materials.



55

### 15 Guidelines and Strategies for Fostering and Enhancing Self-Directed Online Learning

Zhu, M., & Bonk, C. J. (2022). Guidelines and strategies for fostering and enhancing self-directed online learning. *Open Learning: The Journal of Open, Distance and e-Learning*. DOI: <https://doi.org/10.1080/02680513.2022.2141105>

#### 15 guidelines for promoting SDL in MOOCs and similar large scale open education environments:

- (1) helping students set their own learning goals,
- (2) encouraging learners to make plans,
- (3) offering flexible timelines,
- (4) highlighting estimated time frames,
- (5) embedding tasks and activities to form a learning community,
- (6) supplying timely and constructive feedback,
- (7) embedding quizzes for self-assessment,
- (8) crafting visuals showing work progress and tasks completed,
- (9) providing reflection questions,
- (10) designing time-sensitive learning units,
- (11) making available optional learning materials and self-selection options,
- (12) creating a structured learning environment, including weekly overviews,
- (13) making sure that lectures are recorded with captions added,
- (14) inserting application exercises for putting the course material into practice, and
- (15) using gamification to support SDL.

56

### #1. Helping students set their own learning goals

#### Set a weekly goal

Learners who set a goal are 75% more likely to complete the course. You can always change it.

☒ Learn 2 days a week Recommended

☐ Learn 3 days a week

☐ Learn 5 days a week

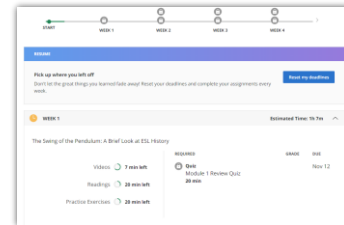
Your goal will be tracked Monday - Sunday

[Set goal](#) [Reset now](#)



57

### #4. Highlighting estimated time frames



58

### #7. Embedding quizzes for self-assessment

**Try again once you are ready.**  
Required to pass 60% or higher. You can retake this as many times as you'd like.

**Why was the grammar translation approach taught? Check all that apply.**

☐ To teach culture and morals. This should be selected

☐ To better prepare learners for interacting with people in a foreign country. This should not be selected

☐ To teach correct grammar and language rules. This should be selected

**2. Who was the typical student in the Grammar Translation approach?**

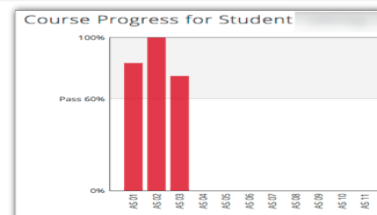
☒ Wealthy young men

☐ Middle class men and women

☐ Poor young men

59

### #8. Crafting visuals showing work progress and tasks completed



60

## #9. Providing reflection questions



61

## #10. Designing time-sensitive learning units

- ✓ **Video:** Introduction to Regression 6 min
- ✓ **Video:** Introduction: Basic Least Squares 6 min

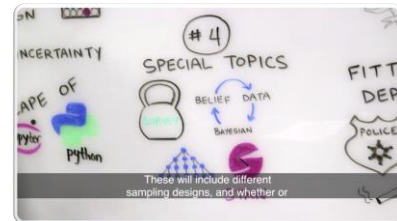
62

## #11. Making available optional learning materials and self-selection options

- Reading: BASIC: A Blanket Around the Earth 10 min
- Reading: ADVANCED: A Blanket Around the Earth 10 min

63

## #13. Making sure that lectures are recorded with captions added



64

## #14. Inserting application exercises for putting the course material into practice

### Week 3 Assessment

This Jupyter Notebook is auxiliary to the following assessment in this week. To complete this assessment, you will complete the 5 questions outlined in this document and use the output from this Jupyter Notebook to answer them.

Run the following cell to initialize your environment and begin the assessment.

```
[1]: # Import and setup
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd

# Set random seed
np.random.seed(123)

# Load dataset
data = pd.read_csv('data.csv')

# Split data into training and testing sets
train_data = data[:1000]
test_data = data[1000:]

# Create a linear regression model
model = LinearRegression()

# Fit the model to the training data
model.fit(train_data[['x'], 'y'])

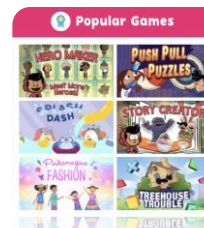
# Predict the output for the test data
y_pred = model.predict(test_data[['x']])

# Calculate the mean squared error (MSE)
mse = np.mean((test_data['y'] - y_pred)**2)
```


Question 1: What is the value of MSE? (You'll answer this question within the quiz that follows this notebook)

65

## #15. Using gamification to support SDL



66



IST CONFERENCE, 2023

**Study #5. Investigating South American Massive Open Online Course (MOOCs) Instructors' Designs Supporting Self-Directed Learning (SDL)**

Xiaoying Zheng, Zixi Li, Dr. Curtis J. Bonk, Dr. Meina Zhu, Dr. Thomas Reynolds


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67

LITERATURE REVIEW

## Research Questions

1. What strategies do MOOCs instructors in South America use to **facilitate learners' self-management skills**, such as goal setting, time, and resource management?
2. What strategies do instructors use to **support learners' self-monitor skills**, such as self-evaluating learning and monitoring process?
3. What strategies do instructors use to **maintain learners' motivation**?
4. What are some **frustrations and challenges** for instructors when they design MOOCs?



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68

METHOD

## Participants Recruitment

1. **366 MOOCs instructors from institutions in South America** were identified from major MOOCs websites (i.e., Coursera, EdX, FutureLearn)
2. A **bilingual survey** in English and Spanish was distributed through emails to these instructors to collect demographic information, understanding towards SDL, and screen participants.
3. The criteria for selecting these participants were that they should have **designed at least one MOOC**.
4. **44 survey responses** were collected, and **11 instructors** accepted the interview invitation.




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69

METHOD

## Participants Demographics

Name	Gender	Country	No. of MOOCs taught
Alejandro	Male	Colombia	1
Bruno	Male	Argentina	more than 5
Christopher	Male	Colombia	2
Daniela	Female	Colombia	1
Echa	Female	Colombia	2
Felipe	Male	Brazil	1
Gavino	Male	Colombia	2
Hernán	Male	Brazil	4
Ignacio	Male	Colombia	1
Jorge	Male	Chile	3
Keiman	Male	Chile	1



70


TENTATIVE FINDINGS

## 1. Self-Management

**Key finding 1:** The most common way to support self-management is breaking down a long video (e.g., 30 mins) into short videos (e.g., 5 mins).

Quote 1: "**Shorter videos instead of longer videos is better** because you can ask questions about the specific topic, not the 30 minutes talking to the camera." (Bruno)

Quote 2: "If you do videos that are 20-min long, that's sad, but they are not going to last. **If you do 5 videos of 3 minutes each**, in comparison to one of 20 minutes, or something like that, it's gonna be different." (Echa)




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71

**Thank You!**  
Q&A

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72