

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

Curtis J. Bonk | [cjbonk@indiana.edu](mailto:cjbonk@indiana.edu)  
Indiana University Bloomington  
With...

Meina Zhu | [meinazhu@wayne.edu](mailto:meinazhu@wayne.edu)  
Wayne State University

1

## Talk Outline

1. MOOC News and Trends
2. Study #1: MOOC Instructor ID Considerations and Challenges
3. Study #2: MOOC ID for Self-directed Learning
4. Study #3: MOOC Instructor Personalization



2

2

## Talk Outline

4. Study #4: Cultural Sensitivity in MOOCs
5. Study #5: MOOC Learners and SDL
5. Study #6: SEM and MOOC Learning
6. Study #7: Duolingo
7. Study #8: Nepali Youth SDL in MOOCs.



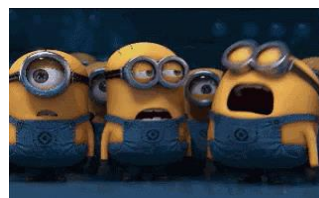
3

3

## Polls

**Poll #1: Who in here has taken a MOOC?**

**Poll #2: Are you happy or frustrated  
when you take a MOOC?**



4

4

## MOOC Trends and Recent Data



5

**April 29, 2020**

### Zoom Boom

Synchronous instruction is trending, but experts say a more intentional mix of live and asynchronous classwork is necessary for future remote terms.

Colleen Flaherty, *Inside Higher Ed*

<https://www.insidehighered.com/news/2020/04/29/synchronous-instruction-hot-right-now-it-sustainable>

#### Zoom Boom

Synchronous instruction is trending, but experts say a more intentional mix of live and asynchronous classwork is necessary for future remote terms.

By Colleen Flaherty | April 29, 2020



6

## December 16, 2019 2020 Impact Report, edX

<https://www.edx.org/sites/default/files/2020-impact-report.pdf>



7

**April 30, 2020**

**New Udem Report Shows Surge in Global Online Ed in Response to COVID-19**  
People around the world are learning how to work from home and stay productive as the Future of Work arrives

**Businesswire:** <https://www.businesswire.com/news/home/2020043005243/en/>

Highest Enrollment Surges by Country Since Shelter in Place



8

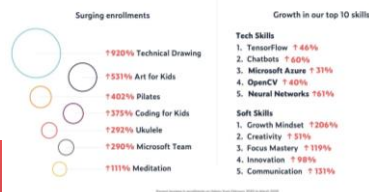
**April 30, 2020**

**New Udem Report Shows Surge in Global Online Education in Response to COVID-19**

There has been an immense surge in enrollments in courses related to Telecommuting (21,598% increase) and Virtual Teams (1,523%), as well as Decision Making (277%), Self Discipline (237%), and Stress Management (235%).

<https://www.businesswire.com/news/home/2020043005243/en/>

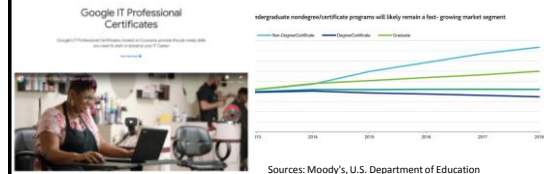
Udemy Topic Enrollment Trends



9

**August 27, 2020**  
**Alternative Credentials on the Rise**  
Paul Fain, Inside Higher Ed

<https://www.insidehighered.com/news/2020/8/27/alternative-credentials-short-term-online-credentials-will-it-be-sustained>

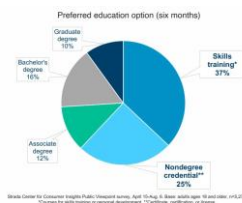


10

**August 27, 2020**

**Alternative Credentials on the Rise**  
Paul Fain, Inside Higher Ed

<https://www.insidehighered.com/news/2020/8/27/alternative-credentials-short-term-online-credentials-will-it-be-sustained>



11

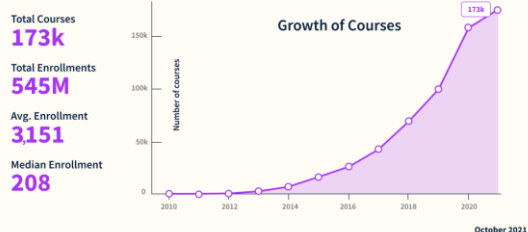
**October 13, 2021**

**Analyzing Udem's IPO Filing:**  
\$430M Revenue; \$30M CorpU Acquisition; Consumer Segment Stalls, Enterprise Grows.

Dhawal Shah, Class Central  
<https://www.classcentral.com/report/udemy-ipo-analysis/>

Udemy: By the Numbers

class central



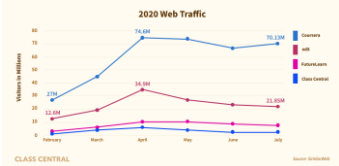
12

## MOOCs Stats

**August 16, 2020**

**By the Numbers: MOOCs During the Pandemic**  
Dhawal Shah, Class Central

<https://www.classcentral.com/report/mooc-stats-pandemic/>

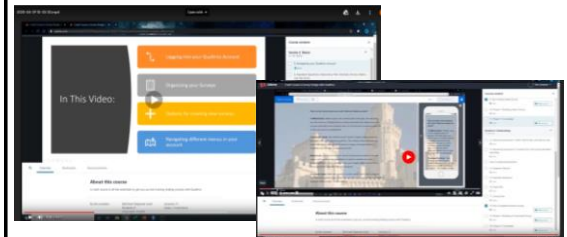


13

## MOOC and Qualtrics

Tanner Phillips, Udemy

<https://drive.google.com/file/d/1fkiTPUbDYIK91V-8R3odkxFyHqQnc0/view>



14

## Hundred+ MOOC Clubs

**February 21, 2020**

**250 MOOCs and Counting: One Man's Educational Journey**, Chronicle of Higher Education

<http://chronicle.com/article/250-MOOCsCounting-One/229397?cid=ast>

If the MOOC movement has faded, nobody told Jima Ngei. Mr. Ngei, who lives in Port Harcourt, Nigeria, has completed and passed 250.



Jima Ngei: "I had this unrelenting fear that this miracle of free access might evaporate soon."



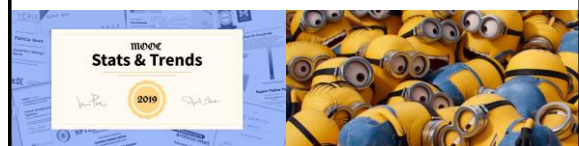
15

## MOOCs Stats

**December 17, 2019**

**Online Degrees Slowdown: A Review of MOOC Stats and Trends in 2019**, Dhawal Shah, Class Central

<https://www.classcentral.com/report/moocs-stats-and-trends-2019/>



16

## MOOCs Stats

**December 17, 2019**

**A Review of MOOC Stats and Trends in 2019**  
Dhawal Shah, Class Central

<https://www.classcentral.com/report/moocs-stats-and-trends-2019/>

CLASS CENTRAL



**110M**

Students



**900+**

Universities



**13.5k**

Courses



**820**

Microcredentials



**50**

MOOC-based degrees

By the Numbers: MOOCs in 2019  
Statistics do not include China

17

17

## MOOCs Stats

**December 14, 2020**

**The Second Year of the MOOC: A Review of MOOC Stats and Trends in 2020**, Dhawal Shah, Class Central

<https://www.classcentral.com/report/the-second-year-of-the-mooc/>



**180M**

Students



**950**

Universities



**16.3k**

Courses



**1180**

Microcredentials



**67**

MOOC-based degrees

class central

By the Numbers: MOOCs in 2020  
Statistics do not include China

18

18

## MOOCs Stats

**December 14, 2020**  
**The Second Year of the MOOC: A Review of MOOC Stats and Trends in 2020, Dhawal Shah, Class Central**  
<https://www.classcentral.com/report/the-second-year-of-the-mooc/>

Most Followed Subjects

Pre-Pandemic	Post-Pandemic
1 Computer Science	1 Personal Development +1
2 Programming	2 Business +1
3 Business	3 Art & Design New entry
4 Personal Development	4 Management & Leadership +1
5 Management & Leadership	5 Self Improvement New entry
6 Data Science	6 Humanities New entry
7 Artificial Intelligence	7 Computer Science -1
8 Information Technology	8 Communication Skills New entry
9 Career Development	9 Health & Medicine New entry
10 Entrepreneurship	10 Foreign Language New entry

class central

19

## MOOCs Stats

**December 17, 2019**  
**A Review of MOOC Stats and Trends in 2019**  
**Dhawal Shah, Class Central**  
<https://www.classcentral.com/report/moocs-stats-and-trends-2019/>

Here's how the top-5 MOOC providers currently look in terms of users and offerings:

	Learners	Courses	Microcredentials	Degrees
Coursera	45 million	3,800	420	16
edX	24 million	2,640	292	10
Udacity	11.5 million	200	40	1
FutureLearn <sup>2,4</sup>	10 million	880	49	23
Swayam <sup>3,5</sup>	10 million	1,000	0	0

20

## MOOCs Stats

**December 14, 2020**  
**The Second Year of the MOOC: A Review of MOOC Stats and Trends in 2020, Dhawal Shah, Class Central**  
<https://www.classcentral.com/report/the-second-year-of-the-mooc/>

	2019	2020	Total
New Registered Users			
coursera	8M	31M	76M
edX	5M	10M	35M
Future Learn	1.3M	5M	15M
class central	350k	800k	2.3M

21

## MOOCs Stats

**December 14, 2020**  
**The Second Year of the MOOC: A Review of MOOC Stats and Trends in 2020, Dhawal Shah, Class Central**  
<https://www.classcentral.com/report/the-second-year-of-the-mooc/>

**Growth of MOOCs**

By the Numbers: MOOCs in 2020  
 Statistics do not include China

22

## MOOCs Stats

**December 17, 2019**  
**A Review of MOOC Stats and Trends in 2019**  
**Dhawal Shah, Class Central**  
<https://www.classcentral.com/report/moocs-stats-and-trends-2019/>

Here's how the top-5 MOOC providers currently look in terms of users and offerings:

	Learners	Courses	Microcredentials	Degrees
Coursera	45 million	3,800	420	16
edX	24 million	2,640	292	10
Udacity	11.5 million	200	40	1
FutureLearn <sup>2,4</sup>	10 million	880	49	23
Swayam <sup>3,5</sup>	10 million	1,000	0	0

That is why I call the rise of online degrees the second season of MOOCs and 2019, the year of MOOC, based degrees.

	2017	2018	2019
Courses	4	11	16
edX	1	9	10
FutureLearn	4	18	23
Udacity	1	1	1
Total	10	39 (1-20)	50 (1-23)

But in 2019, the topic seems to have subsided only 11 online degrees were announced this year. The total number of MOOC-based degrees has now grown to 50.

23

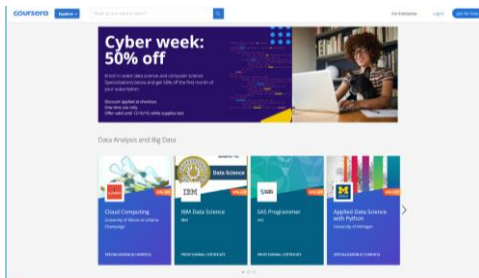
**May 26, 2020**  
**Remember the MOOCs?**  
**After Near-Death, They're Booming**  
**Steven Lohr, The New York Times**  
<https://www.nytimes.com/2020/05/26/technology/moocs-online-learning.html>

*Remember the MOOCs? After Near-Death, They're Booming*  
 The growing online learning movement offers hybrid courses for those motivated that don't rely on live students.

Coursera added 10 million new users from mid-March to mid-May. Credit...Jessica Chou for The New York Times

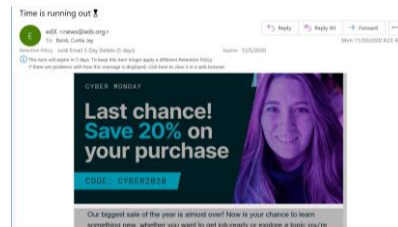
24

**December 15, 2019**  
**Coursera <no-reply@m.mail.coursera.org>**  
**Ends TOMORROW: 50% off top tech Specializations**

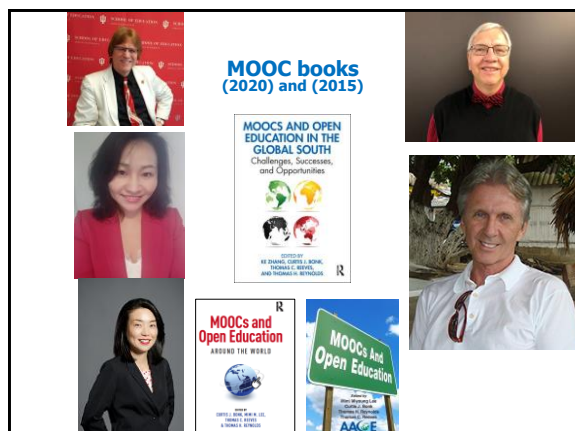


25

**November 30, 2020**  
**Cyber Monday**

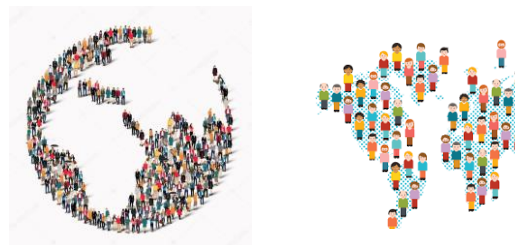


26



27

**October 22, 2021**  
**Wanted:**  
**Billions of Self-Directed Learners**



28

28

**October 22, 2021**  
**Wanted:**  
**Billions of Self-Directed Learners**

<https://www.peoplematters.in/article/training-development/the-era-of-self-directed-learning-has-new-role-and-strategy-24348>



29

29

**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



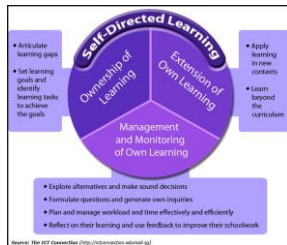
30

30

## The Adult Learner

### One Model of Self-Directed Learning

<http://the-adult-learner-2016.blogspot.com/2016/02/a-single-candle-self-directed-learning.html>



31

31

## Study #1

### MOOCs Design Considerations and Challenges

Zhu, M., Bonk, C. J., & Sari, A. (2018). Instructor experiences designing MOOCs in higher education: Pedagogical, resource, and logistical considerations and challenges. *Online Learning*, 22(4), 203-241.

32

## Research Background

- **MOOCs can be beneficial to both learners and instructors** (Hew & Cheung, 2014).
- **Instructional design is critical for online learning** (Johnson & Aragon, 2003; Phipps & Merisotis, 1999).
- **Instructors are one of the five main components of MOOCs** (Kop, 2011).
- **Few studies have examined instructional design from MOOC instructors' perspectives** (Margaryan et al., 2015; Watson et al., 2016).

33

33

## Research Purpose

The purpose of this study is to provide suggestions for future MOOC instructors and instructional designers in higher education through exploring MOOC design considerations and challenges from the instructor's perspective.

34

34

## Research Questions

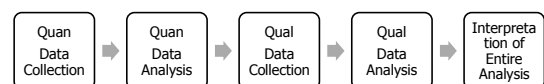
1. What are the design considerations of instructors when designing MOOCs?
2. What challenges do instructors perceive when designing MOOCs?
3. How do instructors address the challenges that they perceive related to MOOCs?

35

35

## Research Design

- **Sequential mixed methods design** (Creswell & Clark, 2017)



36

36



## Data Collection

- **Data Collection:**
  - Survey, interview, and course review
- **Participants:**
  - 143 survey participants (10% response rate)
  - 12 interviewees



37

37

## 12 Interviewees

No.	Countries	Subject areas	Platforms
1.	The U.S.	Language and Literacy	Coursera
2.	The U.S.	Education	Coursera
3.	The U.S.	Education	Canvas
4.	The U.S.	Chemistry	Coursera
5.	UK	Medicine and Health	FutureLearn
6.	UK	Language and Literacy	FutureLearn
7.	Hong Kong (China)	Math	Coursera
8.	Mainland China	Math	Coursera
9.	Canada	Psychology	Coursera
10.	Australia	Medicine and Health	Open2Study
11.	Sweden	Computer Science	edX
12.	India	Management	edX

38

38

## Data Analysis

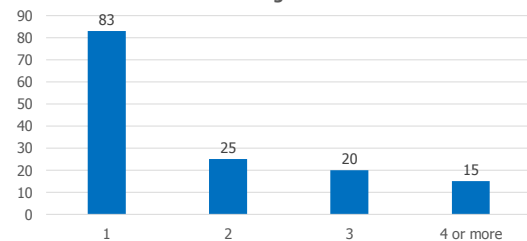
RQs	Data Sources	Data analysis
RQ1	Survey-multiple-choice questions	Descriptive statistics
	Survey-open-ended questions	Content analysis (Elo & Kyngäs, 2008)
	Interview	Content analysis
	MOOC review	Content analysis
RQ2	Survey-multiple-choice questions	Descriptive statistics
	Survey-open-ended questions	Content analysis
	Interview	Content analysis
RQ3	Survey-multiple-choice questions	Descriptive statistics
	Interview	Content analysis

39

39

## Research Context

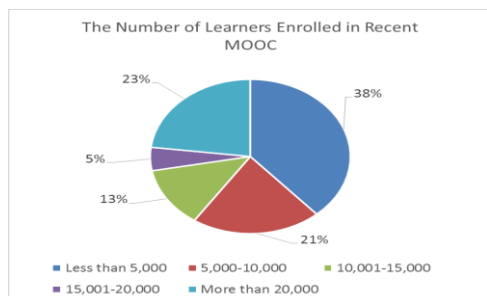
The Number of MOOCs the Instructor has Designed



40

40

## Research Context



41

41

## Findings RQ1

**RQ #1. What are the design considerations of instructors when designing MOOCs?**

- Learning objectives
- Assessment
- Time for designing MOOC
- Engaging learners

### An example of learning objectives:

Learning Objectives

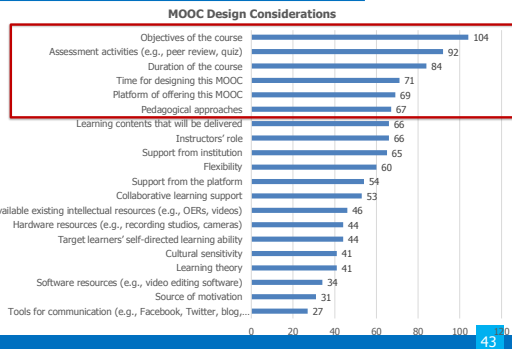
- Discuss the reason for sampling in scientific investigations.
- Describe the types of sampling techniques available.
- Review reasons why randomization is needed.
- Identify the kinds of errors that can arise in sampling.
- Summarize the ways one can evaluate the quality of survey data.
- Discuss the consequences of randomization such as computing quantiles.
- Provide examples of the kinds of objects that are sampled.

Next > Less <

42

42

## RQ1 Survey Results



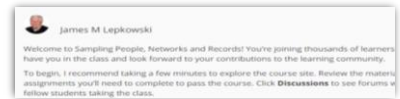
43

## RQ1 Interview Results

### Engage learners

One instructor from US mentioned:

"I engaged people in the forum. So **each week I would write a message that would be the new welcome page for the week** that would say, 'hey come to the forum and ask questions about this or come to the forum introduce yourself'... Of course, I tried to get students to feel like **I was engaged with them during the videos by asking them questions** and telling them to do things during the video."



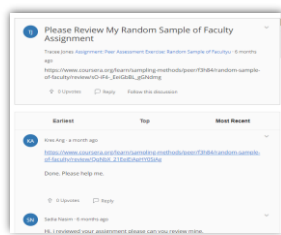
44

## Findings RQ2

### RQ #2. What challenges do instructors perceive

#### when designing MOOCs?

- Assessment methods
- Engaging students' learning
- Time limitation

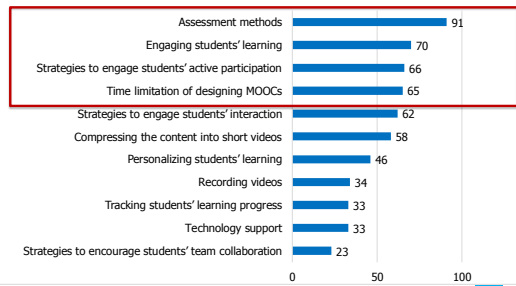


(Note: Above is an example of peer-assessment.)

45

## RQ2 Survey Results

### Design challenges faced by the MOOC instructors



46

## RQ2 Interview Results

### Time limitation

One instructor from education subject mentioned:

"I think one of the challenges is time. It does take a lot of time to get the videos done. **I did not get a course release when I was doing, and it was a side project at the same time as my regular load.**"



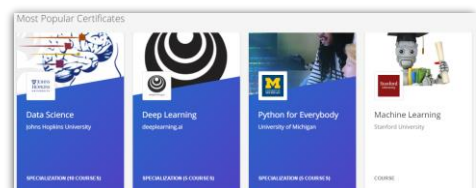
47

## Findings RQ3

### RQ #3. How do instructors address the challenges that they

#### perceive related to MOOCs?

- Explore other MOOC examples
- Seek help from the platform/colleagues/institutions

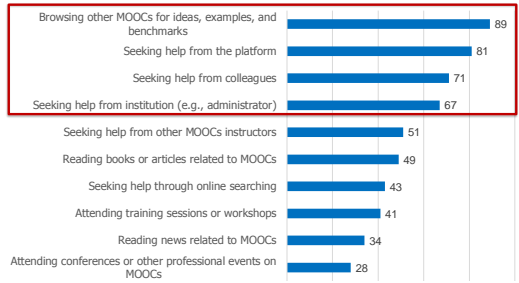


48



## RQ3 Survey Results

### Ways to Address Challenges



49

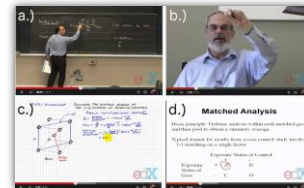
49

## RQ3 Interview Results

### Explore other MOOC examples

One MOOC instructor from the US mentioned:

**"When I started making the MOOC, I could see MOOCs that other people had made. So I could see what other people did in terms of having videos with questions embedded in the videos, which I really liked."**



50

50

## Discussion

- The **time limitation** of creating MOOCs was the primary logistical consideration (Hew & Chung, 2014; Watson et al., 2016) and challenges.
- The **pedagogical factors** were the primary design considerations (Watson et al., 2016) and challenges in MOOC design.
- The **assessment and engagement strategies** are the main considerations as well as challenges.

51

51

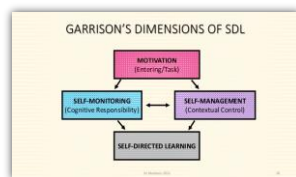
## Study #2 MOOCs Instructional Design to Facilitate Participants' Self- directed Learning

52

## Key Terms

### Self-directed learning (SDL) (Garrison, 1997)

- (1) self-management
- (2) self-monitoring
- (3) motivation



53

53

## Research Background

- **Learners need self-directed learning skills and strategies to be successful in MOOCs** (Halawa, Greene, & Mitchell, 2014; Littlejohn & Milligan, 2016), as there is a lack of personalized interaction with teachers.
- **Self-directness of a learner might vary in different learning environments which means that the learners could be more self-directed in one learning environment than another** (Hiemstra, 1994).

54

54

## Research Background

- **Instructional design can greatly influence students' interaction and engagement** (Garrison & Cleveland-Innes, 2005) **and success in online learning** (Song, Singleton, Hill, & Koh, 2004; Swan, 2001).
- However, few studies have examined instructional design and the delivery of instruction using MOOCs from instructor perspectives (Margaryan et al., 2015; Watson et al., 2016); **especially lacking is research on instructors' perception of SDL and how they design MOOCs to facilitate students' SDL.**

55

55

## Research Purpose

- **The purpose is to inform instructors or instructional designers and MOOC providers of the current practices of designing MOOCs to facilitate learners' SDL.**



56

56

## Research Questions

1. How do MOOC instructors perceive participant SDL skills?
2. How do MOOC instructors perceive their facilitation of participant SDL skills?
3. How do instructors design and deliver MOOCs to facilitate participant SDL skills?
  - a. How is technology being used by MOOC instructors to support the development of participant SDL skills?
  - b. What technology features or functions do MOOC instructors want to have to improve their facilitation of MOOC participant SDL skills?

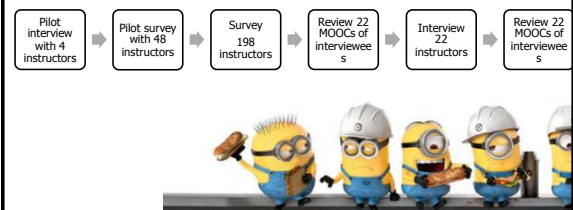
57

57

## Research Design

### Explanatory sequential mixed methods design

(Creswell & Clark, 2017)



58

58

## 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



59

59

Pseudonym	Country	Subject area	Platform	Gender	No. of OR	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	FutureLearn	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	FutureLearn	M	0	3	I with T
Emily	UK	Medicine and health	FutureLearn	F	2	2	I with T
Aiden	UK	Social science	FutureLearn	M	0	1	Self-paced
Henry	UK	Social science	FutureLearn	M	0	1	Self-paced
Joseph	UK	Medicine and health	FutureLearn	M	1	1	Self-paced
Joshua	UK	Literacy and language	FutureLearn	M	2	2	I with T
Mason	Australia	Education	Coursera	M	5 or more	1	I without 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

60

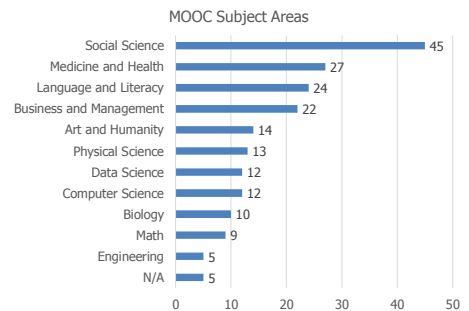
## Data Analysis

RQs	Data Sources	Data analysis	Tools
RQ1	Survey	Descriptive statistics	SPSS
	Interview	Content analysis (Elo & Kyngäs, 2008)	NVivo
RQ2	Survey	Descriptive statistics	SPSS
	Interview	Content analysis	NVivo
RQ3	Interview	Content analysis	NVivo
	Course review	Content analysis	NVivo

61

61

## Research Context



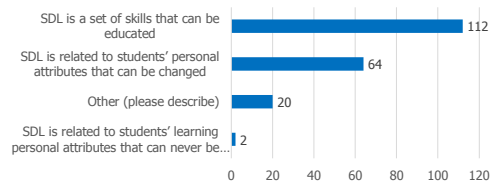
62

62

## RQ1 Perceptions of SDL

- A majority of the MOOC instructors thought that these skills or attributes are not static, and that SDL as a set of skills can be educated or students' personal attributes that can be changed.

MOOC Instructors' Perceptions of SDL



63

63

## RQ1 Interview Results

- Emma's understanding of SDL is more related to self-management and motivation. She said:  
 "When I think about self-directed learning, I think about students **managing their time and managing the coursework on their own, and how it fits into their schedules and their lives, how they interact with materials, what's going to keep them engaged.**"



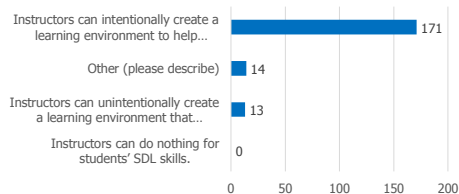
64

64

## RQ2 Perceptions of Facilitation of SDL

- Most of MOOC instructors thought that they can intentionally or unintentionally facilitate students' SDL.

Participants' Perceptions of Their Role in Facilitating Students' SDL



65

65

## RQ2 Interview Results

- Ashely emphasized the importance of both instructors' facilitation and students' SDL skills. She said:  
 "The participant has a lot of flexibility on how they approach the content. I mean, obviously, we have things like assignments. We have things like online forums. And there're ways that we scaffold the learning experience. But there still is a lot of choice for the learner."



66

66

### RQ3 Strategies to Facilitate SDL

- Students' intrinsic motivation plays an important role. However, extrinsic motivation provided by the MOOCs might help transfer extrinsic motivation to intrinsic motivation.

Motivations	Strategies
Entering motivation	MOOC instructors helped students <b>identify the needs and goals of learning</b> and sense of achievement.
Task motivation	MOOC instructors motivated students through instruction, learning materials, feedback, and learning community.

67

67

### RQ3 Learning Community

Putting yourself on the map (External resource)

The World10x Facebook post reads: "A new run for World10x begins today! Expand your knowledge before 2019! #edX #UQX"

68

68

### RQ3 Strategies to Facilitate SDL

- Both internal feedback and external feedback were provided to help students' self-monitoring.

Self-monitor	Strategies
Internal feedback	Cognition: MOOC instructors provided quizzes for self-assessment, tutorial on technology use, learning advice, navigation of the course, progress indicators, resources, and instructional modeling, etc.
	Meta-cog: MOOC instructors encouraged students to reflect and think critically by providing reflection questions and building learning community.
External feedback	MOOC instructors, teaching assistants, and peers were involved in providing external feedback.

69

69

### RQ3 Self-assessment (i.e., embedded quizzes)

Question 2: Who was the typical student in the Grammar Translation approach?

Options:

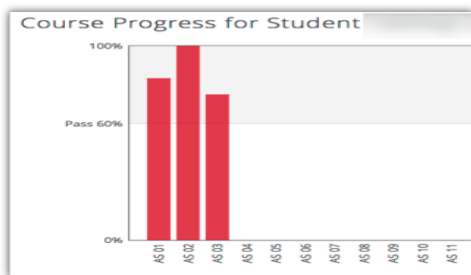
- ☒ Wealthy young men
- ☐ Middle class men and women
- ☐ Poor young men

Feedback: Correct. Yes, this is correct.

70

70

### RQ3 Progress Indicators



71

71

### RQ3 External Feedback: Peer-assessment (e.g., 3 peers assigned to review each assignment)

REQUIRED	GRADE	DUE
<b>Quiz</b> Module 2 Review Quiz 20 min		Nov 19
<b>Peer-graded Assignment</b> Critical Evaluation of the 2 Approa... 2h		Nov 22
<b>Review Your Peers</b> Critical Evaluation of the 2 Approa...		Nov 25

72

72

### RQ3 Strategies to Facilitate SDL

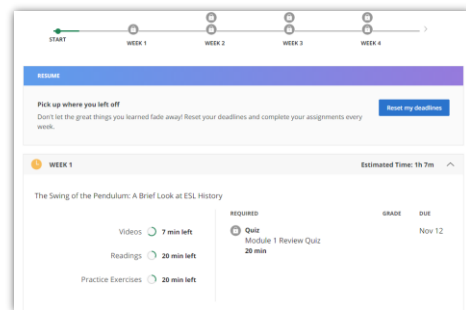
- They helped students' self-management concerning setting learning goals, time management, resources and support management although among the three elements of SDL, MOOC instructors had less control over students' management.

Self-management	Strategies
Enactment of learning goals	Providing discussion questions, reflections, survey, and appreciation students' learning goals.
Time management	Providing time frame, progress indicator, short learning units, and flexible timeline.
Management of resources and support	Providing flexible learning resources, peer-assessment, accessibilities, clear expectations, and short learning units.

73

73

### RQ3 Time Management (e.g., time advisories and estimates)



74

74

### RQ3-a. Tech Used for SDL

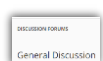
#### • Synchronous communication technologies

- Google Hangouts
- YouTube Live



#### • Asynchronous communication technologies

- Discussion forum
- Blog
- Slackbot
- Flickr



#### • Multimedia (e.g., video and graphics)

#### • Feedback technologies

75

75

### Discussion

- **SDL can be Changed**
- **MOOC Instructors can Facilitate SDL**
- **Strategies to Facilitate SDL:** A variety of strategies can be used to facilitate student SDL skills in terms of motivation, self-monitor, and self-management.
- **Tech for SDL:** Tech plays a vital role in facilitating SDL skills.
- **Tech expectations:** Adaptive learning systems, artificial intelligent systems, and learning analytics were expected to have to support SDL.

76

76

### Implications

#### • For MOOC instructors and Instructional Designers

- Build learning community
- Inspire intrinsic motivation
- Personalize learning



#### • For MOOC providers

- Create a personalized learning environment
- Provide learning analytics to support learning and teaching

77

77

### 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.



78

78

## Top 10 Strategies to Facilitate SDL in MOOCs

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

## Example:

"I have asked, at the first page of course, why they're taking the course. So that is the goal. A lot of people say, 'I'm a teacher. And I want to do the stuff with my kids. Or I want to update my knowledge. Or I'm retired and I want to learn this.'"



79

79

## Top 10 Strategies to Facilitate SDL in MOOCs

## 2. Building learning community.

Joshua from the UK mentioned: We use a lot of resources that already exist. And then we use the MOOC discussion board as a place to where they, kind of, point out and say, "I've seen this. And this is useful. Well, I use this, and this is good. I created this."



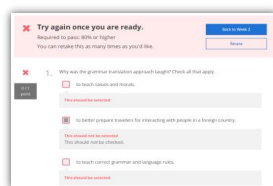
80

80

## Top 10 Strategies to Facilitate SDL in MOOCs

## 3. Offering immediate feedback.

## 4. Embedding quizzes for self-assessment.

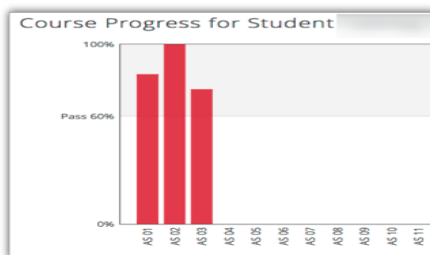


81

81

## Top 10 Strategies to Facilitate SDL in MOOCs

## 5. Providing progress indicators



82

82

## Top 10 Strategies to Facilitate SDL in MOOCs

## 6. Providing reflection questions.

We introduced kind of moments that video was stopped and there was a question. The student had to think of it a bit. Sometimes it was kind of a rhetorical question. There wasn't even no answer required. But it was just a pause for a while to let the student reflect. (Jacob)



83

83

## Top 10 Strategies to Facilitate SDL in MOOCs

## 7. Designing short learning units.

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

84

84



## Top 10 Strategies to Facilitate SDL in MOOCs

### 8. Providing flexible timelines.

You've already completed 71% of your course! Reset your deadlines so you can finish the rest!

Reset my deadlines

85

85

## Top 10 Strategies to Facilitate SDL in MOOCs

### 9. Highlighting estimated time frames.

Video: 1.2 - Popular Music and Classical Music Compared 6 min

Quiz: Popular Music and Classical Music Compared 2 questions Overdue Jun 27, 2:59 AM EDT

Video: 1.3 - Music and Emotions 4 min

Video: 1.4 - How Do We Hear Music? Sound Waves and the Ear 6 min

Quiz: How Do We Hear Music? Sound Waves and the Ear 5 questions Overdue Jun 27, 2:59 AM EDT

86

86

## Top 10 Strategies to Facilitate SDL in MOOCs

### 10. Making available optional learning materials.

Reading: BASIC: A Blanket Around the Earth 10 min

Reading: ADVANCED: A Blanket Around the Earth 10 min

87

87

## 10 More Strategies to Facilitate SDL in MOOCs

MOOC: Infection Prevention and Control (IPC) for Novel Corona virus (COVID-19) from OpenWHO (English Version)

### 11. Structured learning environment:

- Clearly stated the learning objectives.
- Course details stated the expected time to complete the course.
- The syllabus, number of course modules, and title of each module.



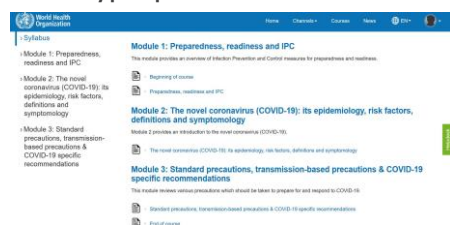
88

88

## 10 More Strategies to Facilitate SDL in MOOCs

### 11. Structure continued...

Graphic or visual organizations for essential material. The text on screen matched the narration enforcing the redundancy principle.



89

89

## 10 More Strategies to Facilitate SDL in MOOCs

### 12. On completion of modules participants get a certificate.



90

90

## The Science of Well-Being, Yale

The screenshot shows the Yale course page for 'The Science of Well-Being'. The page features a blue header with the course title and a 'Yale' logo. Below the header, there is a section titled 'About this Course' which describes the course as a series of challenges designed to increase personal happiness and build personal productivity. It also mentions that the course is free and available to all. The page includes a 'Sign Up' button and a 'Learn More' link. There are also statistics showing that 36% of students reported an increase in happiness and 34% reported an increase in productivity after completing the course.

91

## 10 More Strategies to Facilitate SDL in MOOCs

**13. Week overview.** The course is divided into week-long segments, and each week is chunked into manageable parts. Very importantly for the participant to be able to anticipate what can get done in one sitting, the length of each video is included.

The screenshot shows a 'Week 2' overview page. It lists the videos for the week, including 'Introduction to the Course', 'What is Happiness?', 'The Science of Well-Being', 'The Science of Well-Being', 'The Science of Well-Being', and 'The Science of Well-Being'. It also includes a section titled 'Why We Have Misconceptions' and a 'Week 2 Checklist' with items like 'Video: Introduction to the Course', 'Reading: Introduction to the Course', and 'Quiz: Introduction to the Course'.

92

## 10 More Strategies to Facilitate SDL in MOOCs

**14. Lecture recorded and captions added.**

The screenshot shows a video player interface. The video is titled 'KINDNESS SOCIAL CONNECTION TIME AFFLUENCE MIND CONTROL HEALTHY PRACTICES'. The video is playing, and the captions are visible at the bottom of the video frame. The captions read: 'increasing social connections, finding time affluence.' Below the video player, there is a caption that says 'Caption added to video' and a video of a student audience.

93

## 10 More Strategies to Facilitate SDL in MOOCs

**14. Continued...Lecture video transcripts.**

The full transcript of each video recording is shown below the video player, with the current point in video highlighted as it plays:

The screenshot shows a video transcript. The transcript is titled 'KINDNESS SOCIAL CONNECTION TIME AFFLUENCE MIND CONTROL HEALTHY PRACTICES'. The transcript text is as follows: 'taking in these reference points that are kind of crazy? What's my reference point for what my salary should be as a Yale professor? I could look to Paul Bloom, who's my colleague, who also teaches Coursera courses, he's in the psychology department. He might be a good reference point. That might be okay for me to compare myself to. But it would be bad if I was comparing my salary against Beyoncé's because that's just crazy. I'm not going to be as Beyoncé. I'm not going to make her money. I'm not going to be as beautiful as her. So we would assume that our minds do that. They seem to look in anything around us as a reference point. And given that I'm watching Beyoncé videos, this could be messing me up. And so this is what O'Grady and Schrum looked at. They wanted to see whether people who were exposed to cruder and cruder reference points, more unrealistic standards of salaries and incomes, actually got messed up. And here was their hypothesis. People who watched lots of TV are faced with people with crazy salaries, crazy incomes, crazy beauty levels, crazy stuff, is that messing people up? In other words, just watching a lot of TV where you see things like the Real Housewives and Empire and all this stuff, does that

94

## 10 More Strategies to Facilitate SDL in MOOCs

**15. Quick check tasks.**

The video lectures contain one or two "quick check" pop-up questions to assess understanding (and attention):

The screenshot shows a 'Quick Check' pop-up question. The question is titled 'Part 2: Money' and asks 'How much of the video did you watch?'. The options are 'I watched the entire video', 'I watched most of the video', 'I watched some of the video', and 'I didn't watch the video'. The 'I watched the entire video' option is selected.

95

## 10 More Strategies to Facilitate SDL in MOOCs

**16. Providing students with self-selection options.**

There is the choice to watch all of the videos, read all of the materials, and submit all of the assignments, or there are choices all along the way to "cut corners" and take in only what the participant wants to.

The screenshot shows a 'Question & Answer' interface. It includes a question: 'Not sure if you want to watch the entire video? If you want to skip around, here is the list of questions covered in this segment along with their (Timestamps)'. Below the question, there are two questions with their respective timestamps: 'Question 1 (0:46) Is it statistically more likely to be a medium right? But there is a range. What about the more extreme people in the data set? How do I know I'm not the more extreme sort that do get violently affected by material?' and 'Question 2 (1:57) How much of people's happiness is dependent on the context in which the person is situated, as in the perception that other people around them are happier or less happy? Relative happiness, I guess.' Below the questions, there is a 'Continue' button.

96

## 10 More Strategies to Facilitate SDL in MOOCs

## 17. Visuals showing tasks completed.

Item	Status	Due	Weight	Grade
Week 2 Quiz	Passed	Apr 20 2:59 AM EDT	10%	100%
Week 3 Quiz	Passed	Apr 27 2:59 AM EDT	10%	100%
Week 4 Quiz	Passed	May 4 2:59 AM EDT	10%	83.33%
Week 5 Quiz	Passed	May 11 2:59 AM EDT	10%	100%
Week 6 Quiz	Passed	May 18 2:59 AM EDT	10%	100%

97

97

## 10 More Strategies to Facilitate SDL in MOOCs

## 18. Visuals showing work progress.

Start Your Final Requirement Challenge

Videos: ☐ Done

Readings: ☐ 10 min left

Practice Exercises: ☐ 30 min left

Other: ☐ 5 min left

Nothing due

98

98

## 10 More Strategies to Facilitate SDL in MOOCs

## 19. Rewirements (assignments) for putting the material to practice (e.g., Random Acts of Kindness, Make A Social Connection, Let's Get Physical, Meditate!, Sleep!, Gratitude Letter/Visit, Savoring, etc.)

## Daily Gratitude Journal

Gratitude is a positive emotional state in which one recognizes and appreciates what one has received in life. Research shows that taking time to experience gratitude can make you happier and even healthier. **For the next seven days, you will take 5-10 minutes each night to write down five things for which you are grateful.** They can be little things or big things. But you really have to focus on them and actually write them down (Again, try to develop a tracking method works for you and utilize a note on your phone, a daily calendar, a special notebook, etc.). You can just write a word or short phrase, but as you write these things down, take a moment to be mindful of the things you're writing about (e.g., imagine the person or thing you're writing about, etc.). This exercise should take at least five minutes. Do this each night for the whole week.

99

99

## 10 More Strategies to Facilitate SDL in MOOCs

## 20. Offer community support and help.

## Help Articles

[Coursera Help Center \(Phone help\) - Help Article \(Phone call\) \(2021/07/15\) \(Help Article\)](#)  
[Community \(Phone call\) \(2021/07/15\) \(Community\)](#)

## Community Mentors

Mentors are learners who generously give their time to help others work through courses they have already completed. Not all courses have mentors.

Mentors don't work for Coursera or for the institution offering the course. They just help course material, and they don't change your grades.

## Community Mentor responsibilities:

- Answer learner questions in the discussion forums
- Post new threads to spark discussion
- Provide feedback to Coursera staff

## Become a Community Mentor

When a course needs Mentors, Coursera will send email invitations to learners who we think would be good candidates.

## To qualify as a good candidate you need to:

- Pass the course with a good grade
- Be active in the course by helping other learners in the forums

If you get an invitation to become a Mentor, you will be invited to take a short training course. Once you pass the training course, you will be enrolled as a Mentor in the course we invited you for.

## Support for Mentors

If you're selected to be a Mentor, you'll get training materials and direct support from Coursera to help you.

If you're already a Mentor and you're having a problem or you have questions, please check our Mentor training materials.

100

100

## 10 More Strategies to Facilitate SDL in MOOCs

## Bonus Item: Peer-graded assignments.

Opportunities for student-student interaction and social learning are provided in discussion forums and in the final assignment, a peer-graded reflection.

**Peer-graded Assignment: Reflect on the Requirement Challenge**

**Instructions** **My submission** **Discussions**

Read the prompt and write your response. You have 10 minutes to complete this assignment. You can see the questions and the questions you have asked in the discussion forums.

1. What was the most challenging part of the requirement challenge?

2. What was the most interesting part of the requirement challenge?

3. How did you feel about the requirement challenge?

4. How did you feel about the requirement challenge?

Figure 10: Peer-graded assignments and reflection.

101

101

## MOOC Study #3

International Review of Research in Open and Distributed Learning  
 Volume 19, Number 4

September – 2018

### Pushing Toward a More Personalized MOOC: Exploring Instructor Selected Activities, Resources, and Technologies for MOOC Design and Implementation



Curtis J. Bonk<sup>1</sup>, Meina Zhu<sup>2</sup>, Minkyung Kim<sup>3</sup>, Shuya Xu<sup>4</sup>, Najia Sabir<sup>5</sup>, and Annika R. Sani<sup>1,3</sup>  
<sup>1</sup>Indiana University, USA, <sup>2</sup>University of West Florida, USA, <sup>3</sup>Tyngkarta State University, Indonesia

## Abstract

This study explores the activities, tools, and resources that instructors of massive open online courses (MOOCs) use to improve the personalization of their MOOCs. Following email interviews with 25 MOOC

102

102

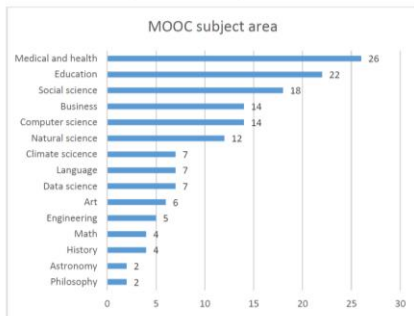


Figure 1. MOOC instructor departmental or primary discipline affiliations (n=150).

103

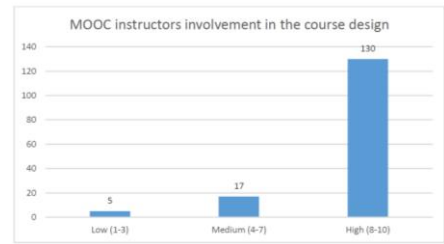


Figure 2. MOOC instructor involvement in designing course content for the MOOC. Note: on a scale of 1 (low) to 10 (high) (n=152).

104

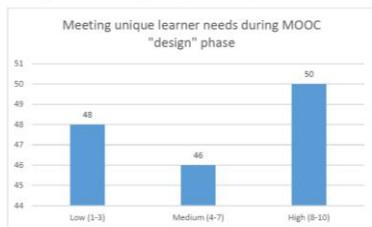


Figure 3. Effort placed on meeting unique learner needs when designing most recent MOOC. Note: on a scale of 1 (low) to 10 (high) (n=144).

105

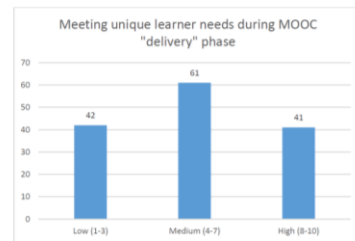


Figure 4. Effort placed on meeting unique learner needs when delivering most recent MOOC. Note: on a scale of 1 (low) to 10 (high) (n=144).

106

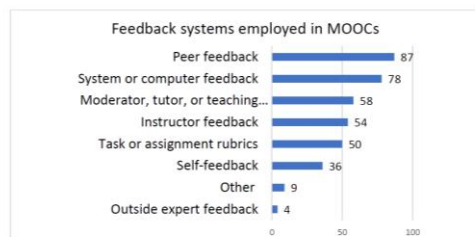


Figure 5. Number of MOOCs that offer different types of learner feedback (n=135).

107

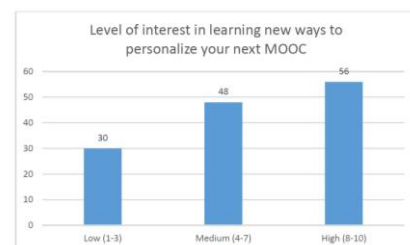


Figure 7. MOOC instructor interest in learning new ways to personalize their next MOOC offer on a scale of 1 (low) to 10 (high) (n=134).

108

103

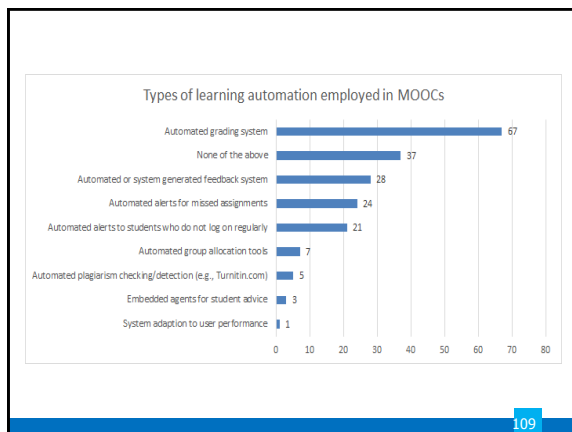
104

105

106

107

108



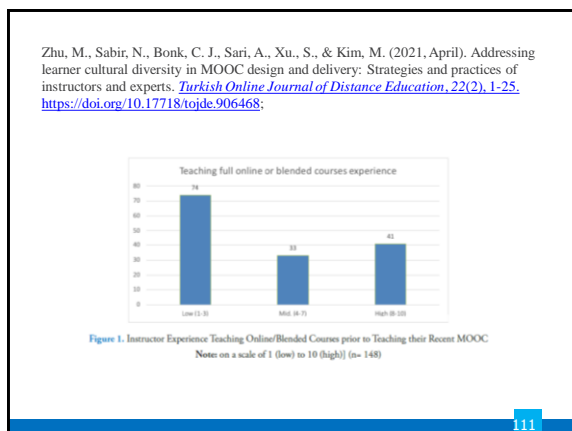
109

### MOOC Study #4

Curtis J. Bonk<sup>1</sup>, Meina Zhu<sup>2</sup>, Monkey Kim<sup>3</sup>, Shuya Xu<sup>4</sup>, Naja Sabir<sup>5</sup>, and Annisa R. Sari<sup>6</sup>  
<sup>1</sup>Indiana University, USA, <sup>2</sup>University of West Florida, USA, <sup>3</sup>Yogyakarta State University, Indonesia

Zhu, M., Sabir, N., Bonk, C. J., Sari, A., Xu, S., & Kim, M. (2021, April). Addressing learner cultural diversity in MOOC design and delivery: Strategies and practices of instructors and experts. *Turkish Online Journal of Distance Education*, 22(2), 1-25. <https://doi.org/10.17718/tojde.906468>

110



111

Zhu, M., Sabir, N., Bonk, C. J., Sari, A., Xu, S., & Kim, M. (2021, April). Addressing learner cultural diversity in MOOC design and delivery: Strategies and practices of instructors and experts. *Turkish Online Journal of Distance Education*, 22(2), 1-25. <https://doi.org/10.17718/tojde.906468>

Table 1. Instructional Practices of MOOC Instructors to Address the Variety of Learner Competencies and Needs (n=142)

Items	Response percent	Response count
Establish learner-based discussion forums	81.0%	115
Embed supplementary course materials	78.2%	111
Post timely course announcements and emails	63.4%	90
Record video tutorials or walkthroughs	40.8%	58
Emphasize project-based learning over exams	34.5%	49
Using preexisting online videos (e.g., Lynda.com, TED talks, YouTube, etc.)	32.4%	46
Other	28.1%	37
Hold synchronous lectures, meetings, and events (e.g., Skype, Google Hangouts, Zoom, etc.)	23.9%	34
Establish study groups	19.0%	27
Establish learner reflection journals or blogs	16.2%	23
Schedule virtual office hours and meetings	14.1%	20
Offer face-to-face meet-up opportunities	7.0%	10

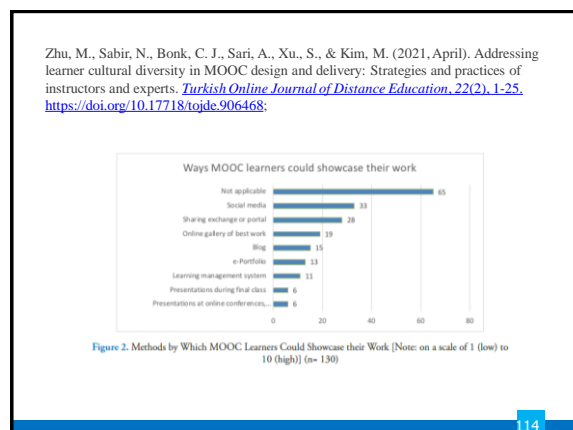
112

Zhu, M., Sabir, N., Bonk, C. J., Sari, A., Xu, S., & Kim, M. (2021, April). Addressing learner cultural diversity in MOOC design and delivery: Strategies and practices of instructors and experts. *Turkish Online Journal of Distance Education*, 22(2), 1-25. <https://doi.org/10.17718/tojde.906468>

Table 2. Items Instructors Provided in their Most Recent MOOC (n = 126)

Items the current MOOC covered	Percent	Count
Optional readings, videos, or other materials	74.6%	94
Learner selected incentives (e.g., certificates, badges, course credit, etc., options)	64.29%	81
Options with course tasks and assignments	38.10%	48
Learner discussion and negotiation of content	36.51%	46
Two or more media elements to learn the same content	31.73%	40
Learner determined or contributed content	30.16%	38
Learner selected learning pathways (i.e., different routes to learn the same content)	19.05%	24
Learner portfolios of course accomplishments	16.67%	21
Choice in team or collaborative partners (i.e., self-formed teams)	12.70%	16

113



114

Zhu, M., Sabir, N., Bonk, C. J., Sari, A., Xu, S., & Kim, M. (2021, April). Addressing learner cultural diversity in MOOC design and delivery: Strategies and practices of instructors and experts. *Turkish Online Journal of Distance Education*, 22(2), 1-25. <https://doi.org/10.17718/tojde.906468>.

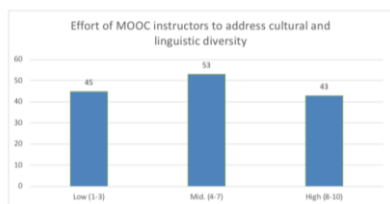


Figure 3. The Perceived Effort of MOOC Instructors in Addressing Cultural and Linguistic Diversity (Notes on a scale of 1 (low) to 10 (high)) (n=141)

115

115

Zhu, M., Sabir, N., Bonk, C. J., Sari, A., Xu, S., & Kim, M. (2021, April). Addressing learner cultural diversity in MOOC design and delivery: Strategies and practices of instructors and experts. *Turkish Online Journal of Distance Education*, 22(2), 1-25. <https://doi.org/10.17718/tojde.906468>.



Figure 4. MOOC Instructors' Instructional Practices to Address Cultural Diversity (n=133)

116

116

Table 3. Best Practice Recommendations by MOOC and Open Education Experts for Addressing Cultural Sensitivity (n=25)

MOOC Stage	Category	Approach
Design	Communication	Provide possible alternative back channels for traditional discussion boards (e.g., WhatsApp, WeChat, KakaoTalk, etc.).
	Course design	Consider the different ways learners read information - Some languages are not presented in a linear format. ... Leverage straightforward course designs as intricate or nested course designs can be difficult to convert across languages and platforms. Ensure visual examples (i.e., icons and caricatures) repeated throughout the course speak to as many standards as possible.
Media use	Media use	Consider different audiences through perspective taking when incorporating multimedia. Overreliance on visual rhetoric (e.g., visual images) alone to communicate can be problematic. Use caution when including videos on an external website, such as YouTube, as content could be restricted for certain users. Remember that converting text into various languages is easier than videos, and it takes much longer to create a video. Slideshows should not overwhelm learners with text; try to use symbols, icons, and other visual elements.
	Reuse and reuse	Ensure inclusivity by openly licensing all educational materials developed for MOOCs, to guarantee the permissions and freedoms required for translation, adaptation, re-use, redistribution, and repackaging. Understand the legal differences and barriers between copyright, copyright, and public. Consider the technology used in development. Ask yourself, "Does it avoid reuse and reuse?"
Technology accessibility	Technology accessibility	Weigh the potential of other instructors' capabilities in reusing/rewriting the content and provide support where appropriate. Appreciate the power of mobile learning: in many regions of the world, learning occurs through mobile devices. Courses should be pedagogically and technologically developed with this in mind. Identify the range of learner digital literacy skills. Encourage learners to create low bandwidth versions of multimedia for those in low bandwidth areas. Foster a learner community where learners help learners in downloading, translating, and testing multimedia.
	Working with a design team	Encourage courses/content to be developed by teams consisting of members for various disciplines, countries, and/or cultures. Actively prepare MOOC instructors and online course designers for cultural sensitivity.

117

117

Delivery	Attire and mannerisms	Remain presentable and well-dressed when appearing in multimedia. Be thoughtful about body movement and overall gestures, as well as images of hand gestures, as different cultures decipher meaning in diverse ways.
	Culture specific	Asian audiences may not be the quickest to voice their opinions and prefer to be spoken to with deference, politely, and softly. Not all learners read left to right. For example, some Middle Eastern learners read content right to left, and some Asian learners read content top to bottom. Content including case situations or scenarios involving alcohol, the incorporation of pictures of dogs (from some nations), political humor/satire, and the use of quotes from religious figures can prove to be controversial and potentially offensive.
Emphasis on expertise	Developing a sense of community	Avoid references to current events that may only be shared by a small subgroup. Urge learners to meet locally or amongst themselves to share materials and address any sensitive concerns. Avoid issues related to religion and politics. Minimize distractions and possible negative responses by staying away from controversial topics.
	Language and translations	Respect the deep-seated cultural differences related to the following: the value of expert vs. learner-originated knowledge; deference to experts; and willingness to engage in discussion and critique - with the most noticeable contrasts between those educated in Anglo-Saxon education systems and in Confucianist ones. Have instructions/directions at the ready, just as a backup, for those who tend to respect authority and prefer following directions. Make subtitles and transcriptions, when possible, available in multiple languages based on intended audiences. This also empowers hard of hearing learners. Even when English is the primary or secondary language of the target audience, consider making MOOC content available in the major dialect(s) of the country. Identify any cultural aspects of resources disseminated as understandings and meanings may not be exact when translated; each linguistic group has its own scientific history and culture. Jokes and humor, in general, can be easily misinterpreted.

118

118

Table 4. Approaches Employed by MOOC Instructors to Enhance Access for Learners with Different Backgrounds and Technology (n=35)

Category	Approach
Collaboration	Work alongside various university divisions (e.g., international office, student support, university expert, and language department). Plan the course with international learners.
Communication, feedback, and language	Offer multiple communication channels. Use simple, slow, and clear language. Do not focus on language or grammar when commenting on forum posts.
Content	Create material that is acceptable for various cultures. Keep cultural differences in mind when designing and producing the material. Emphasize materials which accommodate for various learning preferences. Share personal stories, to some degree, by recording lessons in and around personal opinions. Follow target country's compliance rules and regulations.
Course instruction	Ensure material is kept at a non-expert level. Provide detailed outlines of the lesson. Arrange open course work where everyone can choose to work individually.
Multimedia use	Provide background information and course expectations. Strive to include captioned or transcribed videos and comments. Ensure videos are kept simple and short and include animations in presentations. Leverage free textbooks and open resources. Attempt to provide PDF documents and Word version of materials. Provide text reader or read aloud options, when possible.
Optional resources	Offer supplemental or optional materials.
Technology accessibility	Course materials should be device agnostic, easy to use, and easy to access. Materials can be used on a computer, tablet, smartphone application, or mobile phone. Provide materials that use low bandwidth and make class activities browser based. Make multimedia interactive apps more user-friendly by not engaging Flash-based platforms. Encourage simple navigation. Create user-directed FAQs. Videos and transcripts should be available for download later.

119

119

## MOOC Study #5

### MOOC Learners and SDL

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



120

120



## 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?

121

## MOOC Study #5

### MOOC Learners and SDL

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

Table 1

Fifteen Interviewees' Demographic Information

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

122

122

## MOOC Study #5

### MOOC Learners and SDL

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

Table 2

Coding Themes

Themes	Sub-themes
1. Motivation	Intrinsic motivation Extrinsic motivation
2. Learning strategies	Task strategies Self-monitoring Self-management
3. Instructional elements that support SDL	Self-assessment The discussion boards and instructors' involvement The flexibility of the courses Clear learning goals The authenticity of the content Small learning units

123

123

## 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.**"

124

124

## 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.**

125

125

## 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."**

126

126

## RQ2. Learning Strategies

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

**Note taking:** Dan stated that his main learning strategy was notetaking: "I always have my little notebook for the MOOC that I'm working on or I'm studying. **And whatever videos or whatever exercise that I was doing, I was always taking notes...**"

127

127

## RQ2. Self-monitoring

To help her self-monitoring, Melena noted how enriching her knowledge and knowing new things that she did not know before, along with doing well on the quizzes and tests, were vital indications of her progress. She explained, "**Usually, there is a test after each week. Performing it, I can see in which topic I have the biggest gaps, or I got it well.** Moreover, if I apply it in other areas of my life and it can also be seen then."

128

128

## RQ2. Self-management

Dan, the participant that enrolled in MOOCs as a learner and also taught MOOCs, described how **he dedicated a certain time to work on MOOCs.** For the most part, **he allocated the mornings for reading and the afternoons for writing:** For me, I'm a researcher. I'm better at writing papers in that afternoon and reading in the morning... Also, I try to schedule my time for the MOOC as everyone scheduled. This is time to go to the gym or whatever.

129

129

## RQ3. Design Elements

**RQ3: What Design and Instructional Elements of MOOCs Facilitate Learners' SDL from the Student's Perspective?**

Alina believed that having worksheets or a set of questions after each module was the most helpful strategy to evaluate her learning step by step. **Being able to answer the questions after each module** gave her a sense of how much knowledge she retained before starting the next module. Similarly, Sandy elaborated upon how quizzes and tests were helpful, but she wished they were more advanced and included questions and answers rather than only multiple-choice questions.

130

130

## RQ3. Design Elements

**Design Element: Clear Goals**  
As Dan explained: "**Some tips at the opening** of your MOOC saying: 'hey guys, this is a MOOC that requires you a certain **amount of hours per week.** And there is a strong deadline for delivering homework and during your quizzes.'"

131

131

## RQ3. Design Elements

**Design Element: Authentic Examples**

One participant, Helen, believed that **authentic examples, resources, and visuals that some instructors demonstrated in their courses helped maintain her curiosity.** In our interview, she explained: When I studied the brain, **the professor showed the real brain.** Like, she took us to the laboratory and showed us how the brains, how they did it, they did things in the laboratory. So, I find it fascinating. I find it very interesting. Even though for the test I try to read, but for understanding and looking at the real thing, the visualization is very good.

132

132

## RQ3. Design Elements

### Design Element: Flexibility

Sandy, a former perfectionist, **described her MOOC experience as life-changing**. In this situation, the learner felt more comfortable directing her own learning rather than being pressured to follow a stricter schedule. When asked to describe her MOOCs experience, she explained,

**"It helped me realize that I enjoy learning a lot more when I can just be a little more casual about it. I just find it a lot more enjoyable to learn. I think when I'm enjoying it more, I probably actually learn a lot more."**

133

133

## RQ3. Design Elements

### Design element- small learning units

As Joe explained:

**I think what's really good is keeping it into small chunks. I'm going to say, roughly speaking, 3 to 7 minutes long because that makes it easy for you to put it down and pick it up again in small bits.**

134

134

## RQ3. Responsive Feedback

### Design Element: Discussion board and feedback.

Jacob sadly acknowledged that: "I'll ask [the professor] a question today. **I'll type in a question on my computer in the forum. It may be 2 to 3 weeks before I get a reply.**" Ali expressed that "it would be great to communicate with professors." Similarly, Sarah explained that what affected her experience the most was the **"lack of real-time interaction with the teacher."**

135

135

### Study #6: Self-Directed learning in MOOCs: Exploring the Relationships among motivation, self-monitoring, and self-management, Zhu, Bonk, & Doo, 2020, ETR&D (SEM: Survey of 322 MOOC Learners)



136

136

## Research Questions

**H1: Motivation positively affects self-monitoring of MOOC students.**

**H2: Motivation positively affects self-management of MOOC students.**

**H3: Self-monitoring positively affects self-management of MOOC students.**

**H4: Self-monitoring mediates the relationship between learning motivation and self-management of MOOC instructors.**

137

137

### Study #6: Self-Directed learning in MOOCs: Exploring the Relationships among motivation, self-monitoring, and self-management, Zhu, Bonk, & Doo, 2020, ETR&D (SEM: Survey of 322 MOOC Learners)

Table 7 Direct and indirect effects of each variable in the research model

Paths	Total effect	Direct effect	Indirect effect
H1: Motivation → Self-monitoring	.647	.647***	
H2: Motivation → Self-management	.561	.137	.424*
H3: Self-monitoring → Self-management	.655	.655***	

\*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

Fig. 5 The results of hypothesis testing



Note: \*, \*\* $p < .001$ , \* $p < .01$ , \* $p < .05$

138

138

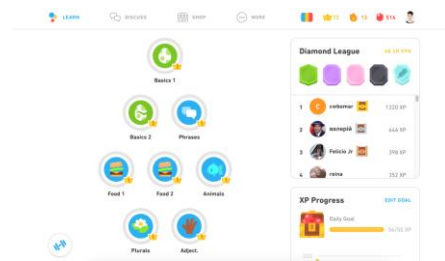
## Study #7: Self-directed language learning in Duolingo

Zixi Li [lizixi@iu.edu](mailto:lizixi@iu.edu)  
Curt Bonk: [Cjbonk@Indiana.edu](mailto:Cjbonk@Indiana.edu)  
Indiana University



139

## Duolingo Features



140

## Duolingo, CAPTCHA co-founder Luis von Ahn wins prestigious Lemelson-MIT prize; Video

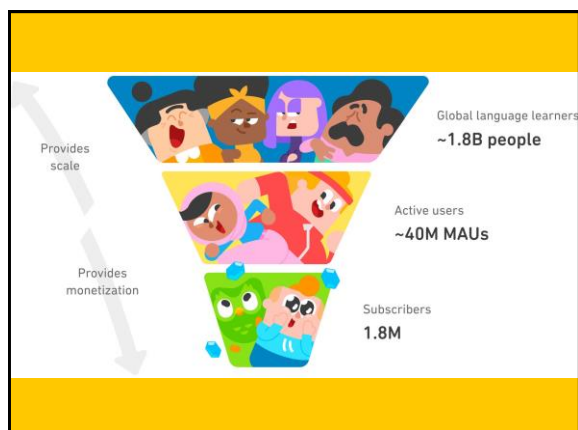
<https://www.nbcnews.com/news/latino/duolingo-captcha-co-founder-luis-von-ahn-wins-prestigious-lemelson-r998536>



141



142



143



144



145

## Study #7: Overview

- This study investigated how the design and delivery of Duolingo support and facilitate student self-directed learning (SDL).
- This study used a mixed-method.
- 84 survey respondents, and 10 semi-structured interviews.



146

146

## Study #7: Scholarly Significance

- The trend under **globalization**
  - Learning foreign languages has become a trend under globalization. Whether you are taking a foreign language class in school or self-study, using language learning software is very common in the learning process.
- Impact of **Covid-19**
  - Since the March 2020, with the impact of Covid-19, people stay home and quarantine, there is a rapid growth of Duolingo

147

147

## Description of the Product

**Duolingo is a free language-learning platform that has been one of the most popular tools for language learning. It includes a language-learning website and a mobile application, offering free lessons among 30 languages for more than 300 million learners.**



148

148

## 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?

149

149

## Survey Participants

With the acknowledgment that Duolingo users have diverse backgrounds, participants should represent a wide range of age and ethnic groups. Participants include randomly selected Duolingo users who:

- Are willing to participate in the evaluation
- Have experience using Duolingo to learn a foreign language

150

150

## Interview Participants

Participants are recruited based on their responses to the survey, which also should reflect the diverse backgrounds of Duolingo users. Participants have to be at least 18 years old.

151

## Interview Participants

Interviewee	Country	Gender	Native Language	# of years that the participant has used Duolingo	# of languages that the participant is learning with Duolingo
P1	Mexico	M	Spanish	More than 5 years	3
P2	The U.S.	M	English	1-3 years	1
P3	China	F	Chinese		1
P4	Costa Rica	F	Spanish	6 months - 1 year	1
P5	China	F	Chinese	1-3 years	1
P6	Indonesia	F	Indonesian	6 months - 1 year	3
P7	Germany	M	German	6 months - 1 year	1
P8	The U.S.	F	English, French, Spanish	6 months - 1 year	1
P9	U.K./ Singapore	M	English	6 months - 1 year	3
P10	Singapore	F	English, Malay	Less than 6 months	1

152

## Preliminary Findings

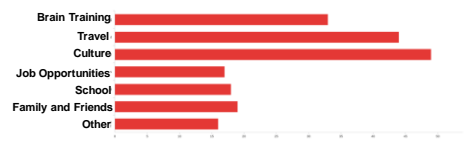


153

## Finding 1: 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?



154

154

## Finding 1: 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)



155

155

## Finding 1: Motivation

3. Language learners are particularly motivated for their personal relevant needs, such as practical communications.

- I just want to learn to speak and just be confident in this language**, and be fluent in the language at some point, and just be able to converse with people who maybe don't speak English or something. (P7)
- My goal is to learn Arabic relatively well because of my fiance**. That's one of his native languages. And we would love to raise our kids bilingual. (P8)
- I'm not an academic. I just enjoy communicating. (P9)
- Basically I have a Japanese neighbor** who I was trying to communicate with. (P10)
- I think ultimately languages are about communication. (P10)



156

156



## Finding 1: Motivation

### 4. Peer groups and social events are positive motivators.

- **I used to post my achievements with my friends on Facebook.** And I have motivated people to keep the streaks. We congratulate each other. (P1)
- I do interact a lot on the Duolingo Japanese forum. **I like to help, help out other Learners.** (P2)
- I'm looking for Duolingo events as well because **we can be more active, like talking with other people, learning with other people as well.** (P6)
- I think Duolingo, it's kind of good at capitalizing on personal and social motivation, and everybody's mentioned that. (P7)



157

157

## Finding 2: Self-management

Purely relying on Duolingo to study a foreign language is not effective, a variety of electronic and non-electronic resources are needed to supplement Duolingo learning.

- One of the reasons that I do recommend that people have a bunch and you use a bunch of stuff. (P2)
- I think my biggest suggestion, as I mentioned a little earlier, **is just don't use Duolingo as your only resources.** (P3)
- Possibly not to just use Duolingo alone, **use it as a starter base to just get sufficient vocabularies** to take you to the next level of crafting sentences. (P10)



158

158

## Finding 3: Self-monitoring

Most of the learners highly relies on the technology to support monitoring, such as reinforcing micro learning habits without extra effort and maintaining learning process by receiving frequent practice reminders and notifications.

- And after you have chosen the wrong one and at the end of this lesson, **the system will provide you with a repeated choice to make you make a choice again.** (P3)
- And I don't actually see much about self-monitoring in the process. **Because they have a clear structure, clear modules.** Basically, you just tap in and go with it. (P5)
- **I think when they come to self-monitoring, it is really lacking,** because there's no little test that I can take, and "okay, I have progressed to this level." (P10)



159

159



160



161

## Hey Duolingo...!!!



162

162

## Do we have time for another study?



163

## Study #8. Present Study...Nepali Youth Learn from MOOCs

With:

Diinoza Kadirova: [diinozakadirova@gmail.com](mailto:diinozakadirova@gmail.com)

Zixi Li: [lizixi@iu.edu](mailto:lizixi@iu.edu)

Curt Bonk: [Cjbonk@indiana.edu](mailto:Cjbonk@indiana.edu)  
Indiana University



164

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



165

## November 9, 2019 Greetings from Nepal, Baman Kumar Ghimire, Teacher Motherland Secondary School, Pokhara

From: Baman Kumar Ghimire <[baman.ghimire@gmail.com](mailto:baman.ghimire@gmail.com)>  
Sent: Saturday, November 9, 2019 1:49 PM  
To: Thomas C. Reeves <[treeves@uga.edu](mailto:treeves@uga.edu)>; Ke Zhang <[prof.zhang@gmail.com](mailto:prof.zhang@gmail.com)>; Bonk, Curtis Jay <[Cjbonk@indiana.edu](mailto:Cjbonk@indiana.edu)>; Tom Reynolds <[tomreynolds@hotmail.com](mailto:tomreynolds@hotmail.com)>  
Subject: Nepal\_Update

Hello MOOC Mentors,  
Greetings from Nepal

A piece of exciting outcome from Nepal. In February 2019, I held a workshop in a school about 70 students of age 13-15. I was excited to learn that in less than 8 months 78 students of age 10-15 from that school completed at least a MOOC. They have started mentoring MOOC to the neighboring schools, too. They are guided by no any incentives nor the craze for the popularity but they enjoy learning Online and taming fellows be digitally smart. Thus, through my request, last month, Regional English Language Office(RELO) from US Embassy Nepal visited the school to honor their MOOC-Craze handing them the certificate they got.

Likewise, lately reported that, a school whose head teacher and a few students I mentored in 2017 has about 350 students completing at least a MOOC. Acknowledging the benefits of MOOCing and the growing interest of the students and guardians, the school administration has made at least a MOOC compulsory for the students age 11-14 in its school.

I am working on a next research on if MOOCs can benefit the students in Nepal. I have surveyed almost 800 high school students from Semi-urban regions of Nepal for the cause. Let's see what the finding will be!

Thanks for activating my MOOC spirit!

Good Times,  
Baman Kumar Ghimire  
Teacher, Motherland Secondary School, Pokhara  
Alumnus, International Exchange Programs(USA)  
Alumnus, Australian Awards



166

## November 9, 2019 Greetings from Nepal, Baman Kumar Ghimire Teacher, Motherland Secondary School, Pokhara



167

## Participant #1 (boy, grade 10)

20 students in Nepal from December 18, 2018 to January 10, 2019 from a public school where English is taught only for about 5 years. The study participants are invited to share their experience for learning English.

- From Questioning
1. English for Science, Technology, Engineering and Mathematics
  2. Understanding Research Methods
  3. Global Warming, Climate Change
  4. Global Warming, Climate Change
  5. Global Warming, Climate Change
  6. Global Warming, Climate Change
  7. Global Warming, Climate Change
  8. Global Warming, Climate Change
  9. Global Warming, Climate Change
  10. Global Warming, Climate Change
  11. Global Warming, Climate Change
  12. Global Warming, Climate Change
  13. Global Warming, Climate Change
  14. Global Warming, Climate Change
  15. Global Warming, Climate Change
  16. Global Warming, Climate Change
  17. Global Warming, Climate Change
  18. Global Warming, Climate Change
  19. Global Warming, Climate Change
  20. Global Warming, Climate Change



168

### Participant #1 (boy, grade 10)

12. Patrick Henry: Forgotten Founder  
13. Freud: Psychology and Mental Health  
14. Introduction to Neuroscience: How the Brain Makes Decisions  
15. Introduction to AI  
16. Teach English Now! Second Language Reading, Writing, and Grammar  
17. Teach English Now! Second Language Listening, Speaking, and Pronunciation  
18. Teach English Now! Technology Enriched Teaching  
19. Public Psychology: Martin E. P. Seligman's Victory Science

#### Specialization Courses

1. Learn English: Advanced Grammar and Punctuation
2. IELTS: Cambridge Part 1: Teach English Now! Specialization
3. Fundamentals of Neuroscience Specialization
4. Entrepreneurship Specialization
5. Key Technologies for Business Specialization
6. Applied Data Science Specialization

#### Professional Course

1. IBM Data Science Professional Certificate

#### Other Criteria Courses from Various Providers

1. Future Learn COVID-19 TRACKING THE NOVEL CORONAVIRUS
2. Course # 1047: Defense by Arab History
3. Edgewise # Introduction to Python: Master Python Basics in Only 2 Hours
4. VCEAS # 1047: WEB DEVELOPMENT COURSE
5. World Health Organization COVID-19: Operation Planning Guidelines and COVID-19
6. Microsoft # 1047: How the World of COVID-19 Evolves



169

### Participant #2 (girl, first MOOC age 10)

Observed MOOCing at the age of 10. The list includes only those courses she completed during the pandemic. She has been taking 4 hours classes from school every day for the last 5 months.

1. Ideas for better world: leading change through policy making
2. Introduction to psychology: designed
3. Introduction to psychology: Learning
4. What is psychology?
5. Social Psychology
6. Social Psychology: 1. Consciousness
7. Social Change: How can marketing help?
8. Design: Communication and pandemics: Are you ready?
9. Digital Media: Social Media
10. Introduction to Conversational Interfaces
11. Introduction to Creative AI
12. COVID-19: Effective Nursing in times of crisis
13. How to bring time back and
14. Shaping mental health and stress
15. Future: Shaping the health workforce
16. COVID-19: Helping young people
17. Changing our work with impact
18. Introduction to Marketing in a Digital World
19. Essential skills for career development
20. Creating a Social Media Marketing Campaign
21. How to create great online content?
22. Learn to Code for Kids
23. Get creative with people
24. Computer programming with everyone
25. COVID-19: Understanding the virus and its impact
26. Introduction to Artificial Intelligence: A Beginner's Guide



170

### Participant #3 (teenage girl)

(This is the girl who is seen in your promo page. She comes from the area that experiences very low internet connectivity.)

1. Plagues, witches, and war: The worlds of historical fiction
2. English for stem
3. Wonders of ancient Egypt
4. Introduction to programming and animation with Alice
5. Tricky English Grammar
6. Creative writing: The craft of plot
7. Greek and Roman mythology
8. English for career development
9. The science of well being

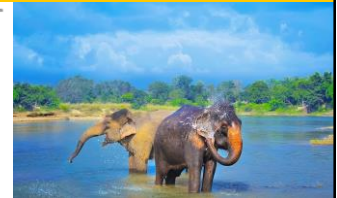


171

### Participant #4 (13 year old girl; first MOOC at age 9)

253 courses from Coursera and about 20 from other platforms. She started MOOCing when she was 9 years old.

1. Social Psychology
2. Introduction to Psychology: Designed
3. Economy: Exploring Time and Space
4. Designing Workflows
5. Designing with Data
6. Data Science and Cognition
7. Introduction to Psychology
8. The Science of Success: What Researchers Know that You Should Know
9. History of Design
10. Introduction to Psychology in Society
11. Understanding in Applications on Action
12. Introduction to Psychology
13. Introduction to Psychology: Designed
14. Learning: Introduction to Psychology: Designed
15. Data 101: Overview of Data Science
16. Data 101: Overview of Data Science
17. Data 101: Overview of Data Science
18. Data 101: Overview of Data Science
19. Data 101: Overview of Data Science
20. Data 101: Overview of Data Science
21. Data 101: Overview of Data Science
22. Data 101: Overview of Data Science
23. Data 101: Overview of Data Science
24. Data 101: Overview of Data Science
25. Data 101: Overview of Data Science



172

### Participant #5 (teenage girl)

12 courses during the lockdown plus some others before this too. Has been taking 5 hours classes from school every day for Sunday-Friday and manages time for the MOOCs

1. Paleontology: Early Vertebrate Evolution
2. Data 101: Overview of Data Science
3. Think Again 1: How to Understand Arguments
4. Stanford Introduction to Food and Health
5. Mountains 101
6. English for Science, Technology, Engineering and Mathematics
7. Verb Tenses and Passives
8. Tricky English Grammar
9. Getting Started with Essay Writing
10. Epidemiology: Pandemics and outbreaks
11. COVID-19: What You Need to Know (CME Eligible)
12. English for Career Development



173

**November 9, 2019**

**Chapter 9. Nepali High School Students in Massive Open Online Courses (MOOCs): Impressive Results and a Promising Future**

**Baman Kumar Ghimire and Bishwa Raj Gautam**

**Greetings from Nepal**

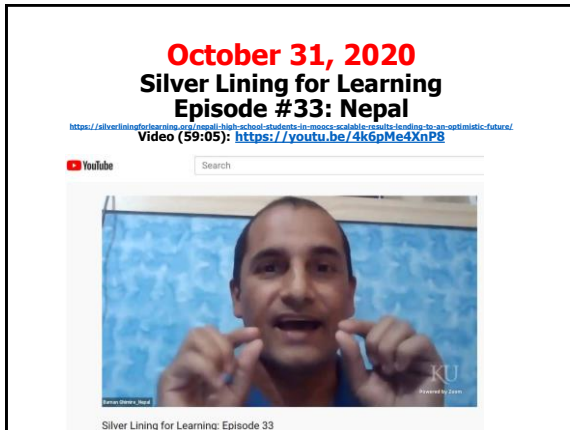
**Baman Kumar Ghimire**

**Teacher, Motherland Secondary School, Pokhara**



174





175



176



177



178



179



180

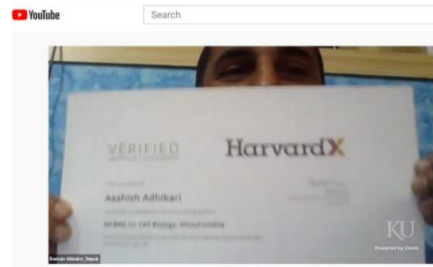
**October 31, 2020**  
**Silver Lining for Learning**  
**Episode #33: Nepal**



Silver Lining for Learning Episode 33

181

**October 31, 2020**  
**Silver Lining for Learning**  
**Episode #33: Nepal**



Silver Lining for Learning: Episode 33

182

**October 31, 2020**  
**Silver Lining for Learning**  
**Episode #33: Nepal**



Silver Lining for Learning: Episode 33

183

## What's Next?



184

## What's the Future?



185



## Any Questions?

Curtis Bonk: [cjbonk@indiana.edu](mailto:cjbonk@indiana.edu)

Meina Zhu: [meinazhu@wayne.edu](mailto:meinazhu@wayne.edu)

Slides and Proceedings Paper at TrainingShare.com:  
<http://www.trainingshare.com> (go to "Archived Talks")

186