

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

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ICER Conference, Seoul National University
October 22, 2021

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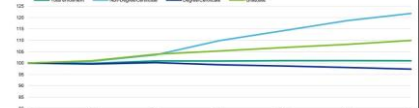
August 27, 2020 Alternative Credentials on the Rise Paul Fain, Inside Higher Ed

<https://www.insidehighered.com/news/2020/08/27/interest-rapid-short-term-online-credentials-will-it-be-sustained>

edX Expands MicroMasters
Programs With Data Science,
Digital Leadership and More



While still a small share, undergraduate nondegree/certificate programs will likely remain a fast-growing market segment
Index 2012 = 100



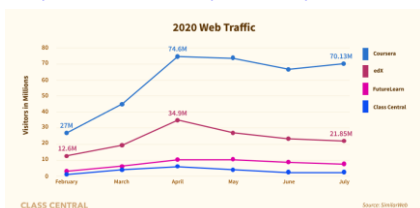
Sources: Moody's, U.S. Department of Education

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MOOCs Stats

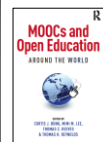
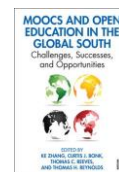
August 16, 2020

By the Numbers: MOOCs During the Pandemic
Dhawal Shah, Class Central
<https://www.classcentral.com/report/mooc-stats-pandemic/>



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MOOC books (2020) and (2015)



4

October 22, 2021

Wanted:
Billions of Self-Directed Learners



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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.

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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.

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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?

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Data Collection

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



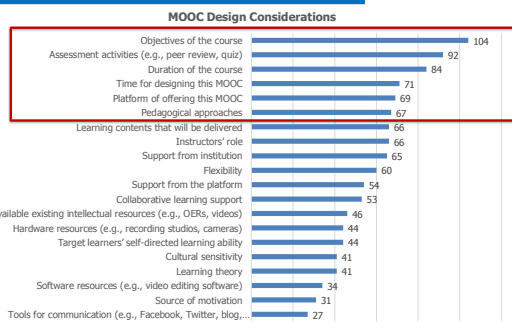
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12 Interviewees

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

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RQ1 Survey Results



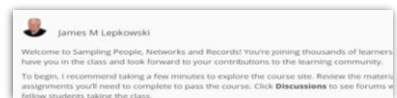
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RQ1 Interview Results

Engage learners

One instructor from US mentioned:

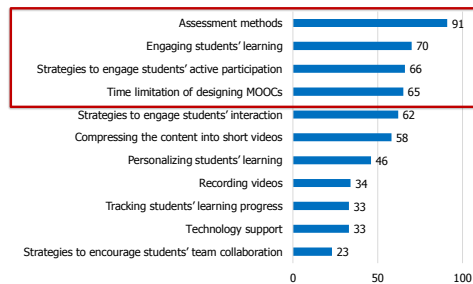
"I engaged people in the forum. So **each week I would write a message that would be the new welcome page for the week** that would say, 'hey come to the forum and ask questions about this or come to the forum introduce yourself'... Of course, I tried to get students to feel like **I was engaged with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



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RQ2 Survey Results

Design challenges faced by the MOOC instructors



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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.**"

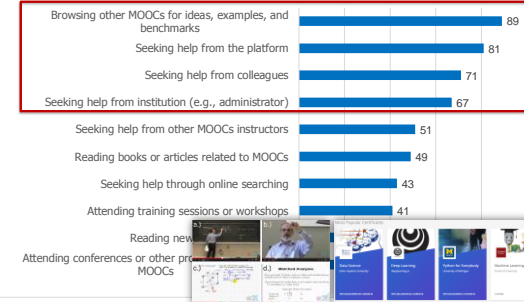


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RQ3 Survey Results

Ways to Address Challenges



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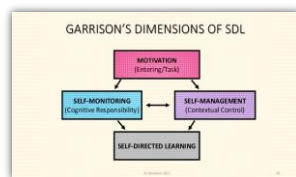
Study #2 MOOCs Instructional Design to Facilitate Participants' Self- directed Learning

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Key Terms

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

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



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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.



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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?

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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



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Pseudonym	Country	Subject area	Platform	Gender	No. of O/B	No. of M	Mode of the M
Lucas	US	Social science	edX	M	0	1	I without T
Branden	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 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	Netherland	Science	Coursera	M	0	1	I with T
Dylan	Israel	Science	Coursera	M	5 or more	3	I without T

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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.**"



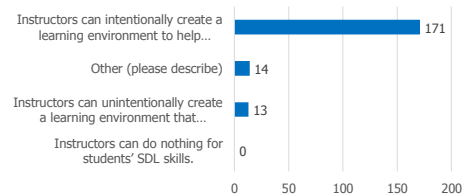
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RQ2 Perceptions of Facilitation of SDL

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

Participants' Perceptions of Their Role in Facilitating Students' SDL



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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."



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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.

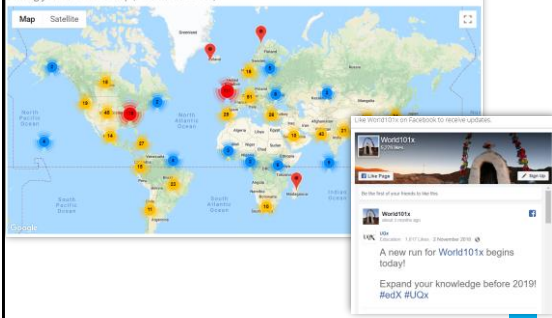
Motivations	Strategies
Entering motivation	MOOC instructors helped students identify the needs and goals of learning and sense of achievement.
Task motivation	MOOC instructors motivated students through instruction, learning materials, feedback, and learning community.

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RQ3 Learning Community

Putting yourself on the map (External resource)



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RQ3 Strategies to Facilitate SDL

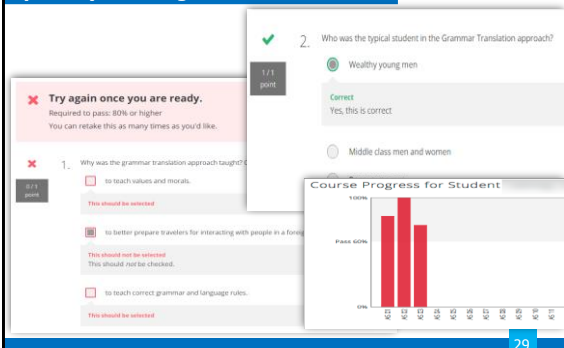
- Both internal feedback and external feedback were provided to help students' self-monitoring.

Self-monitor	Strategies
Internal feedback	<p>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.</p> <p>Meta-cog: MOOC instructors encouraged students to reflect and think critically by providing reflection questions and building learning community.</p>
External feedback	MOOC instructors, teaching assistants, and peers were involved in providing external feedback.

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RQ3 Self-assessment (i.e., embedded quizzes) and Progress Indicators



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RQ3 Strategies to Facilitate SDL

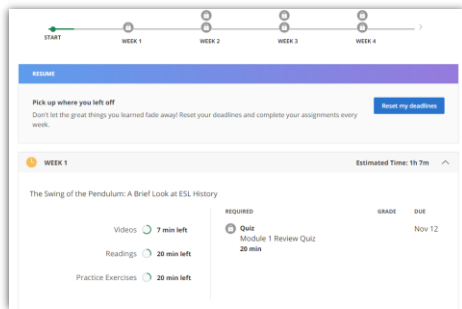
- They helped students' self-management concerning setting learning goals, time management, resources and support management although among the three elements of SDL, MOOC instructors had less control over students' management.

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.

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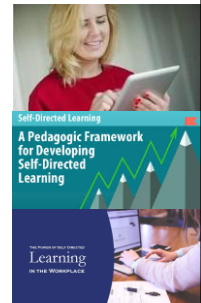
RQ3 Time Management (e.g., time advisories and estimates)



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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.



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More Strategies to Facilitate SDL in MOOCs

11. 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.

Key Concepts

- Understand that simply knowing is not enough to change behavior
- Give examples of what things won't make you as happy as you think they will
- Reverse and reconsider goals and aspirations that will not lead to improved well-being
- Practice savoring and gratitude every day for at least one week

Your Requirements for this Week

- Reading: Savoring & Gratitude: 10 min
- Video: Savoring: 1 min
- Video: Gratitude: 10 min

Things We Think Will Make Us Happy (But Don't)

- Video: Part 1 - Good Job: 7 min
- Video: Part 2 - Money: 11 min
- Video: Part 3 - Awesome Stuff, Trust Lines, Perfect Body & Good Grades: 10 min

Why We Have Misconceptions

- Video: Amazing Features of the Mind: 8 min

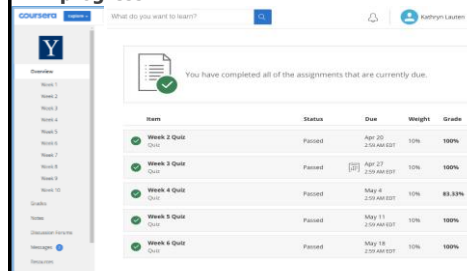
Week 2 Review

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More Strategies to Facilitate SDL in MOOCs

12. Visuals showing tasks completed or work progress.



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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. Bonk¹, Meina Zhu², Minyoung Kim³, Shuya Xu⁴, Najia Sabir⁵, and Annisa R. Sari^{1,3}
¹Indiana University, USA, ²University of West Florida, USA, ³Yogyakarta State University, Indonesia

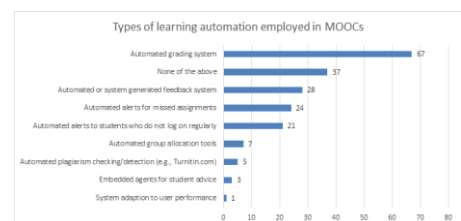
Abstract

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

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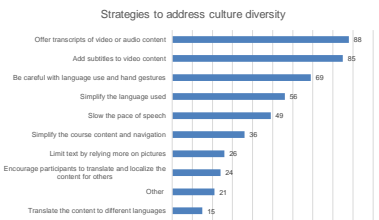
Figure 1. Number of MOOCs that offer different types of learning system automation and adaptation (n=127)



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Figure 2: MOOC instructors (n=133) instructional practices to address cultural diversity



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MOOC Study #4

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

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RQ2

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."

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RQ3

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.

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Study #5: 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. 4. *** $p < .001$, ** $p < .01$, * $p < .05$

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Study #6: Self-directed language learning in Duolingo



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Study #6: 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.



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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?

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Interview Participants

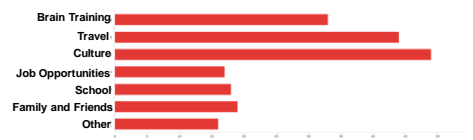
Interviewee	Country	Gender	Native Language	# of years that the participant has used Duolingo	# of languages that the participant is learning with Duolingo
P1	Mexico	M	Spanish	More than 5 years	3
P2	The U.S.	M	English	1-3 years	1
P3	China	F	Chinese		1
P4	Costa Rica	F	Spanish	6 months - 1 year	1
P5	China	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

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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?



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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)



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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 fiancé. 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)



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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)



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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)



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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)



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Do we have time for another study?



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Study #7. Present Study...Nepali Youth Learn from MOOCs



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November 9, 2019

**Greetings from Nepal,
Baman Kumar Ghimire
Teacher, Motherland Secondary School, Pokhara**



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Participant #1 (boy, grade 10)

12 courses for the student from the University of Indiana. A student 10th grader from a public school who began to struggle with the school during a week. He started joining into any course he finds publishable for learning English.

- Free Courseware
1. English for Science, Technology, Engineering and Mathematics
 2. Understanding Research Methods
 3. Small Business for Students
 4. Small Business for Students
 5. Standard Introduction to Food and Health
 6. Letter and the World
 7. Please Consider
 8. Health: How far you go in the world
 9. Learning your national identity
 10. Digital Health Policy
 11. English for Science
 12. Code Yourself an Introduction to Programming
 13. Business Finance
 14. English for Journalism
 15. Teaching English as a Second Language Online
 16. Creative Writing: Techniques and Tools for Students
 17. Economic Growth and Distribution: Justice Part I: The Role of the State
 18. Economics: Exploring: Spreading: Emerging: Technologies, and Global Solutions
 19. Introduction to Cloud Identity
 20. Introduction to Cloud Identity
 21. Introduction to Cloud Identity
 22. Introduction to Cloud Identity
 23. Introduction to Cloud Identity
 24. Introduction to Cloud Identity
 25. Introduction to Cloud Identity
 26. Introduction to Cloud Identity
 27. Introduction to Cloud Identity
 28. Introduction to Cloud Identity
 29. Introduction to Cloud Identity
 30. Introduction to Cloud Identity



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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 all
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



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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. Dino 101: Dinosaur Paleobiology
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. Verts: Tensens 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



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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



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



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Any Questions?

Curtis Bonk: cjbonk@Indiana.edu

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

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