

Understanding Teachers' Engagement with Open Educational Resources “Developed by Local for Local”: A Case Study of OER for Vulnerable Students in Lebanon

by

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Dedication

To my parents who first introduced me to the possibilities education offers and still encourage me to pursue every opportunity wherever it takes me.

Acknowledgements

This dissertation is not solely mine, for I did not do it alone. I am so grateful to have had a wonderful community at the University of Michigan and beyond to support me and my work.

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Preface

I want to recognize the tragedies that Lebanon has continued to face since conducting this study. In this paper, I describe the context in late 2023 to early 2024, but since then, the attacks of Israel on Lebanon have killed almost 3,500 civilians, wounded over 14,000, displaced 1.3 million people, and turned 40% of public schools into shelters, creating more turmoil and heartache on top of the struggles detailed in this paper (Shuayb et al., 2024). My thoughts continue to be with Lebanon, Lebanese Alternative Learning (LAL), and all the wonderful, hard-working teachers who contributed to this study and to the betterment of all the students of Lebanon.

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Abstract

UNESCO (2017) promotes open educational resources (OER) as inclusionary and participatory because they are freely accessible resources that can facilitate receiving and sharing knowledge. However, the ways in which local participants, especially in the Global South, engage with OER is understudied. Arinto et al. (2017) have developed levels of social inclusion to understand and encourage the local participants in the Global South to use, adapt, and create OER. In this dissertation, I used the model from Arinto et al. (2017) as a framework to further understand the possibilities of localized OER. I conducted a case study of Lebanese Alternative Learning (LAL), a grassroots nonprofit organization in Beirut, Lebanon, which had created a digital platform called *Tabshoura* aligned with the Lebanese curriculum. LAL uses their platform to support teachers and students in navigating challenging and changing circumstances during the economic and refugee crises in 2023. While LAL does not use “open” to describe *Tabshoura*, this platform is freely accessible and available to all. I sought to understand *Tabshoura* as “open” by asking how LAL presents the platform and how teachers engage with *Tabshoura*. I used document reviews, interviews, and observations to learn more about LAL and their intentions for *Tabshoura*. I used a photovoice approach to understand teachers’ engagement with OER (Wang and Burris, 1997). Teachers submitted photos and brief captions in response to a prompt, and I then interviewed teachers and observed their classrooms while they taught with *Tabshoura*. I also supplemented this approach with additional teacher interviews and classroom observations.

This case study offered the opportunity to study a particular use of localized OER by teachers in the Global South at the classroom and school level. LAL's intention for *Tabshoura* was to provide access to the Lebanese national curriculum. The teachers reported the decisions they made about how to use *Tabshoura* to implement the appropriate pedagogical approaches to enable students to direct their own learning and to collaborate with other students. Most teachers explained how they used the platform to facilitate alternative learning outside the classroom and how they reordered lessons, simplified activities, and combined *Tabshoura* with additional activities to meet students' needs. One school also edited and created content on the platform with support from LAL. In explaining their decisions, the teachers expressed confidence in *Tabshoura*'s reliability, usefulness, and personal benefits. Through *Tabshoura*, many teachers also reported they felt encouraged and supported by the community they strengthened with LAL, within their schools, with parents, and with students. Using Arinto et al. (2017) as a framework to analyze the teachers' engagement with OER, they were able to "use," "adapt," and "create" in ways that were appropriate and useful for their purposes at the classroom and school level. From this case, I created a supplemental model to Arinto et al. (2017) to showcase how Lebanese teachers developed agency by engaging with OER to support their students. Recognizing the role openness played for the teachers in this study shifts the focus from the characteristics of resources and technology to the teachers themselves. Through this case study, I showed how centering the teachers and their role with OER helped to further define "open" as inclusive and participatory at the classroom and school level.

Chapter 1 Framing the Study

In 2012, the president of EdX, the open courseware hosted by Harvard and MIT, declared open educational resources (OER) as transformative for education as the printing press (Rosen, 2012). OER can facilitate receiving and sharing knowledge because they are freely available resources intended to democratize education (Ossiannilsson, 2023). Participants further defined OER at UNESCO's 2nd World OER Congress in 2017 in Ljubljana:

Toward the realization of inclusive Knowledge Societies, Open Educational Resources (OER) support quality education that is equitable, inclusive, open and participatory.... OER are a strategic opportunity to improve knowledge sharing, capacity building and universal access to quality learning and teaching resources. (UNESCO, 2017, p. 1)

UNESCO's definition describes OER as facilitating education that is inclusive and participatory because more knowledge can be shared and received by more people. OER highlights the power dynamics of whose knowledge is valued and taught through educational materials. Being open means increased access to knowledge, but embedded in the concept of OER is also a consideration for the quality of education. OER are tools that can be used by educators to invite more knowledge holders to contribute to the production and development of relevant resources that reflect those who will use them and that support their goals.

This dissertation is a case study of OER that was created locally by a nonprofit in Lebanon and was adopted and adapted by teachers in response to challenging circumstances. Lebanese Alternative Learning (LAL), an educational nonprofit in Beirut, Lebanon, strives to provide a digital learning experience that addresses the inequities the students of Lebanon face in their education and prepares teachers to support their futures (LAL, n.d.-d). For this mission,

LAL has created *Tabshoura*, a digital learning platform that houses content aligned with the Lebanese curriculum for a consistent, relevant education that enhances teachers' methodologies and meets students' needs (LAL, n.d.-c). LAL and its *Tabshoura* offer an opportunity to study a case of how locally created OER contributed to teachers' engagement with the platform and their goals of supporting students.

In this dissertation, I focus on how LAL presents their platform and then how teachers engage with the locally created OER to meet their needs. This case study has a "process orientation" because I ask "what the *process* is that connects x and y" (Maxwell, 2013, as cited in Bartlett & Vavrus, 2017, p. 8). Here, I am studying the process that connects *Tabshoura* and teachers' goals. As UNESCO's definitions described, OER can create an inclusive and participatory education, so studying the process of how LAL presents *Tabshoura* and then how teachers engage with it will contribute to understanding the role local OER can play in supporting teachers, especially when they are navigating unique and tough circumstances.

More than the technology that is often associated with the distribution of OER, UNESCO's description of creating an equitable and inclusive education through OER is the focus of this study and is what attracted me to studying and working with OER from the beginning. I first worked with an educational technology startup that used innovations like the Raspberry Pi, or small and inexpensive computers, to share OER offline to support low-resource areas across the world. From rural areas in India to the prison system in Idaho, there were many different reasons that these teachers required OER to fulfill their purposes. While the technological aspect was important for increasing access, the startup also had to consider the role of those using the resources for improving the quality of the materials. Each set of teachers were navigating different circumstances, so their experiences and knowledge of the needs of their

students needed to be considered and valued in the development and implementation of their OER. Having something freely available and accessible was just one part of their reasons for engaging with OER, for the teachers' participation and inclusion was also important for ensuring that the resource supported their purposes. This startup would build relationship with the teachers in order to adjust and improve the OER according to the contributions and directions from the teachers. This engagement with OER was my introduction to how OER in practice can be more than a tool for adapting content, for they can also be used as an entry point into for democratizing education through the agency of teachers. As I continued to work with teachers in my other projects, I saw how their knowledge was valuable but not always considered in interventions and improvements. The nonprofits I worked for purposefully strove to depart from interventions that dictated plans to teachers and, instead, focused on including teachers and supporting their leadership in the educational improvement efforts. UNESCO's definitions and promotions of OER as an opportunity to increase participation of knowledge holders like teachers supported the same challenge to power dynamics that I had witnessed in my OER work and the same inclusion of teachers that I am studying in this dissertation.

Furthermore, this case study is a "made case," which means I chose LAL and its *Tabshoura* because of the qualities of OER I saw in the platform and not because it was promoted as OER (Ragin, 1992). LAL does not use the language "open" to describe *Tabshoura* because as the founder of LAL described to me, their understanding of being "open" is centered on choosing a Creative Commons license and including the relevant label on all their materials, which they saw as a barrier for them. As they deal with crisis after crisis, LAL does not have the capacity for considering *Tabshoura* open as they perceive Creative Commons has institutionalized. However, *Tabshoura* is freely accessible, non-proprietary, and non-

commercial. I made this case by “pinpointing and then demonstrating [the] theoretical significance” of how *Tabshoura* is open as presented by LAL and then as teachers engaged with the platform (Ragin, 1992, p.10). Ragin also explained that the “interaction between ideas and evidence” make new theoretical claims possible (p.10). In this dissertation, I studied how the interaction of ideas of engagement with OER, especially as presented by Arinto et al. (2017), and the evidence from LAL and from teachers contributed to further understanding of openness. Arinto et al. (2017) have studied cases that challenge the power dynamics of participating in and leading OER. From these examples, they have developed a model to measure and encourage the inclusion of the engagement of local users of OER. Currently, however, there is a lack of research on how OER are adapted and contextualized for the local use (Buckler, et al., 2014; Wolfenden and Adinolfi, 2019). In this dissertation, I used the model from Arinto et al. (2017) as a framework to further understand localized OER with *Tabshoura* as an example. This case offers the opportunity to study a particular use of OER. As a grassroots nonprofit, LAL created *Tabshoura* for distribution to the local region. *Tabshoura* was localized from its beginning, so teachers engaging with this platform are re-localizing the resources for their classrooms and schools as they navigate changing and challenging circumstances.

I begin this study in Chapter 2 with an explanation of the circumstances of Lebanon in which teachers used *Tabshoura* during the period of this study in late 2023 and early 2024. Circumstances are continually changing in Lebanon and are not fully represented in the field of open education, so understanding the climate and events that made *Tabshoura* needed is important for exploring how teachers are engaging with the platform. I will also introduce LAL and its goals for *Tabshoura* and its other programs to better understand how they view the role of *Tabshoura* for supporting teachers and students. In Chapter 3, I discuss the need for inclusion

and participation of the local participants with OER engagement. Using the social inclusion model from Arinto et al. (2017), I explore selected example cases that focus on how educators in the Global South engage with OER to fulfill their purposes. LAL and *Tabshoura* will contribute an additional case for understanding how teachers can use OER to better support their students. Next, in Chapter 4, I will describe the data collection and analysis for both how LAL intended the use of *Tabshoura* and how teachers engaged with *Tabshoura*. Data collection and analysis differed for the two steps of this study, though they often overlapped. To study LAL and its presentation of *Tabshoura*, I reviewed documents, observed their internal team meetings and meetings with partners, and I interviewed members of LAL. For the teachers' engagement with *Tabshoura*, I used photovoice, which includes photos and captions submitted by teachers in response to a prompt, interviews with teachers, and observations of teachers using *Tabshoura* in their classrooms. I then supplemented photovoice with additional interviews and observations. In the next two chapters, I will discuss my findings. In Chapter 5, I describe the findings in relation to how *Tabshoura* is "open" as presented by LAL, and then in Chapter 6, I describe the findings for how *Tabshoura* is "open" as engaged by teachers in their classrooms and schools. Finally, in Chapter 7, I use the Arinto et al. (2017) social inclusion model as a framework to discuss the findings of LAL's *Tabshoura* and the teachers in this study. I then elaborate the model by offering additional nuance of how teachers are empowered at every level of engagement with *Tabshoura*. They re-localized this platform as a means to their ends and were able to support students and their learning during challenging circumstances.

Chapter 2 Lebanon Context and LAL

Lebanon is experiencing several crises simultaneously; yet, the Lebanese people, especially educators, have continued to persevere and adapt to changing conditions to continue to provide quality education and opportunities for their students. Lebanon has a long, rich history that is beyond the scope of this study, but since OER have historically been developed in Western contexts, understanding the events and climate that created the need and desire for OER in an understudied region is important for improving OER and the field of open education. The circumstances I explain in this chapter are set in late 2023 and early 2024, or the time this study was conducted. I write about these events as “present,” though I recognize more events have occurred and changed since the study, as addressed in my preface. I will describe in this chapter how the converging crises of the last few years have impacted education in Lebanon and how grassroots organizations like Lebanese Alternative Learning (LAL) have developed programs and initiatives to bridge the gaps in education.

2.1 Lebanon in Crisis

Lebanon is experiencing the worst economic crisis the world has seen in over 150 years with its currency losing 90% of value since 2019 (Reuters, 2023; World Bank Group, n.d.). Inflation was approximately at 171% in 2022, “one of the highest rates globally” (World Bank Group, 2023, para. 3). From 1997 to 2019, the Lebanese lira was LL1,507 to U.S. dollar but then fell drastically to LL140,000 in 2023 (Bechara, 2024). Most Lebanese had their savings in lira, so with the fall of the currency, they lost all their savings. “Three-quarters of Lebanon’s 6

million people” are now in poverty (Chehayeb, 2023, para. 11). The Lebanese lost their faith in the country’s financial institutions when banks limited withdrawals and in the government who mismanaged the economy (Chehayeb, 2023). This distrust people have in the authorities can be visibly seen as the photo I took of a bank with graffiti that said “thieves.” Furthermore, the path



Photo 2.1: My photo of a bank with graffiti

forward is unclear. The instability of the Lebanese currency has resulted in a cash-based economy based on the U.S. dollar. There is much debate on whether continued dollarization is the way forward or if this only normalizes the instability (World Bank Group, 2023). Overall, the economic collapse has drained the people of their wealth and their faith in financial authorities.

During this time, Lebanon also was upended by several other crises. First, the Beirut port explosion of 2020 was one of the largest non-nuclear explosions in history, and it killed over 200 people, impacted over half of the city, and damaged 163 public schools (Human Rights Watch, 2021; Issa, 2020). There are many questions left unanswered about the cause of this disaster, and further trust was lost in the government for how they mismanaged the large shipping port (Human Rights Watch, 2021; Al Jazeera, 2023). This explosion also occurred while the world

was experiencing the COVID-19 pandemic that shut everyday life down and hindered economic recovery. Moreover, tensions in the region were also present. With a long history of conflict and occupation between Israel and Lebanon, struggles with Israel were still ongoing at the southern border and rose quickly after October 7, 2023, which was immediately after I conducted this study (Al Jazeera, 2024; Sly, 2023). Lebanon is also “hosting the largest number of refugees per capita” with over 1.5 million from Syria and an additional 11,000 from other countries like Sudan and Iraq (UNHCR, 2024, p. 1). For a country that is already wrestling with its own economic decline, accommodating a new population has been difficult. Furthermore, nine out of 10 Syrian refugees need support for their basic needs, especially since obtaining legal residency needed for employment and basic services is difficult (UNHCR, 2024). Unfortunately, these refugees were not always welcomed and were even blamed for the country’s multiple crises (Randhawa, 2024). This tension between populations contributes to the unease and struggles of the country. Overall, Lebanon is navigating several crises at once that have targeted their wealth, health, and stability.

The effects of these crises and even the anticipation of the next ones are visible within Beirut and the country. As Photo 2.2 shows, the large souks, or markets, that host high-end stores

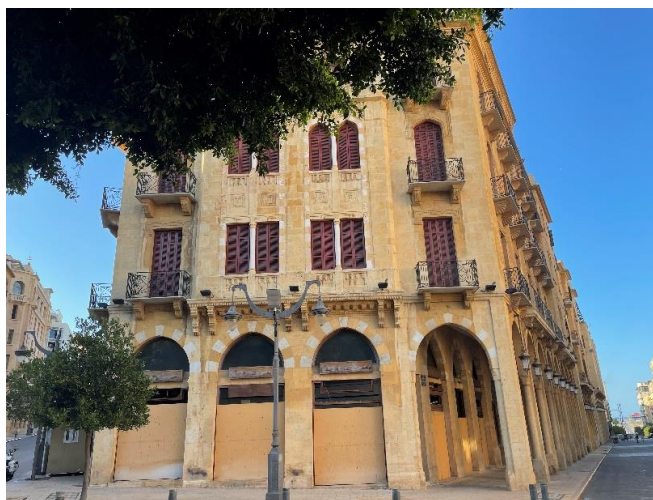


Photo 2.2: My photo of boarded up building

and international brands were largely empty, and buildings nearby are also boarded up.

Vacation homes of the wealthy in the mountains surrounding Beirut were also abandoned. As many of the wealthy left the city and the country, the rest were left to navigate a new reality, which included past and possible future conflicts. For instance, Beirut has living memorials of past conflicts as reminders of what was lost and as a prevention for future violence. Beit Beirut, pictured in Photo 2.3, is a museum that was once a key space full of snipers during the Lebanese civil war from 1975-1990. Now it serves as an educational and cultural city for all. Alternatively,



Photo 2.3: My photo of Beit Beirut

there are also signs of preparation for handling future conflict. The neighborhood around the national government buildings had blockades positioned on the streets to prevent vehicles from entering the area. Barbed wire was also visible in the immediate area of the capitol building.



Photo 2.4 My photo of a blockade and barbed wire

Throughout Beirut, there were military checkpoints ready to be filled and used at cross streets and key points of the city.



Photo 2.5 My photo of checkpoints in Beirut

Lebanon memorializes how it has overcome past tragedies while at the same time, its economic losses and preparation for more conflict are visible and present.

2.2 Education Crisis in Lebanon

The economic collapse and additional crises have led to an inaccessible educational system for Lebanese students and for the many refugee students seeking a place in the country's education system. In 2023, over one million students in Lebanon were forced to leave school (Save the Children, 2023). Schools are frequently closed due to teachers being forced to leave or to strike in demand of a livable salary, and the cost of electricity and transportation prevent many students from attending school when it is open. Teachers and students also have to deal with widespread blackouts because the government can often only afford to provide electricity for a few hours a day (Human Rights Watch, 2023a). In 2022, schools had been mostly closed for the past three years, and in March 2022, the public schools had only been open for about 30 days that academic year (Human Rights Watch, 2022). Previously, many families chose private schools over public schools, but average tuition for private schools has increased to US\$3,620 for 2023-2024 school year while “the average household income this year [2024] is only \$855 per month” (Shuayb et al., 2024, p. 19). Private schools are now more unaffordable for many. After already enduring closed schools during the Covid-19 pandemic, a generation of students are at risk of missing out on an education (Human Rights Watch, 2023b).

When teachers and students do attend school, they still face many challenges. The Centre for Lebanese Studies conducted an assessment based on previous national exams for all subjects in November 2023 of almost 300 Grade 10 public school students across five Lebanese governorates. They found that these students had significant loss of learning: “only 3% of students passed the mathematics exam, 8% passed the Arabic exam, and 13% passed the English exam” (Shuayb et al., 2024, p.18). In May 2024, they conducted a survey with Grade 12 public and private students and only “17% of public school students felt ready to take the official exams” because they had missed “765 teaching days since 2016” (p.18). Only 39% of these

students felt the quality of their public school education was good in 2023. The students have missed out on so much education, and then the education they do receive is not consistent enough to make up for these losses. Furthermore, Centre for Lebanese Studies found that “44% of Grade 12 students reported poor psychological wellbeing” (Shuayb et al., 2024, p.19). The crises in Lebanon are not only preventing students from attending school but also affecting their emotional wellbeing.

Moreover, instability in neighboring countries like Syria has added to the number of students needing access to schools. The Vulnerability Assessment of Syrian Refugees in Lebanon (VASyR) of 2023 found that 44% of refugee children (ages 6-17) are not in school while 35% of youth (ages 15-24) have never attended school (UNHCR, n.d.). Furthermore, dropout rates are high with “fewer than 4% of Syrian children progress[ing] to secondary education” (Shuayb et al., 2024, p. 21). VASyR also found these students face many barriers to education in Lebanon with cost of transportation the most prohibitive. The cost of education supplies and the need to work also keep students from attending school. In addition to concerns about financial and physical access to schools, Syrian refugees have to navigate the politics preventing their access. For instance, the Ministry of Education and Higher Education (MEHE) created an AM and PM shift system in public schools, but this approach to integration has led to discrimination, bullying by peers and teachers, and overall social exclusion (Hajir et al., 2024). Furthermore, MEHE requires documentation to register for school, which can delay or even prevent those who are not citizens from attending school (UNHCR, n.d.). Therefore, over 60,000 Syrian refugee students attend non-formal education programs at education centers that are run by NGOs (Shuayb et al., 2024). These alternatives to public school provide access to schooling, but they do not guarantee a transition to formal education nor a recognized diploma of education

(Sekhon Atac et al., 2023). The education system in Lebanon is struggling with inconsistent electricity, and those who are most marginalized are often left behind without access to education.

This crisis has also created a challenging and unsustainable environment for teachers. Hammoud and Shuayb (2022) from the Center for Lebanese Studies conducted a study of the impact of the economic crisis on education, especially teachers. Over 500 teachers from all governates with 57% from private schools and 43% from public were included. Their average monthly income fell from \$2,000 to \$131, and with the commute to school priced at \$128, teachers are then left with only \$3 for their living expenses. The majority of teachers cannot pay their bills, and almost all have said they cannot afford needed medical care. Even when MEHE offered teachers an additional \$90 to cover the salary loss and to end the striking, 20% of teachers did not receive it because they could not afford transportation to school and were punished for absenteeism by withholding the allowance they needed. Overall, 73% of teachers do not think they can remain in education, and furthermore, 75% also say they cannot stay in Lebanon. Over 15% of private school teachers have already left Lebanon, leaving the teachers who have remained with more responsibilities without the respective financial support (Bahous, et al., 2022). A cab driver shared his story with me, for he was a former computer science teacher who had to leave the profession because he could no longer afford to stay in this field. He explained that he now made more money as a driver and a private tour guide for tourists such as myself. He missed the students, but teaching was no longer a possibility for him. The economic crisis is preventing teachers from supporting students and even themselves in this difficult time.

2.3 Lebanese Resistance and Persistence

So far, I have presented the challenges that face Lebanese people and educators. These circumstances are difficult and are beyond one educator's control. However, the Lebanese have continued to find ways to push forward without the support of the government or authorities. The country has not had a president for the past two years, and with the mistrust growing from the collapse of the economy and the port blast, volunteers, nonprofits, local businesses, entrepreneurs, and individual citizens have worked together to provide the electricity, water, food, education, and services they all need (Yee, 2024). Yee wrote that a private school board member said that ““This is the only way.... We can't rely on the government, but we surely can rely on those around us”” (2024, para. 28). I saw this first-hand with my hotel, which purchased electricity for the streetlamps on one of the main streets to make walking at night safer for all. It even used its kitchen to feed those displaced by the recent attacks.

Community is important to the Lebanese, and they have learned to lean on each other instead of relying on those in power. This spirit of taking care of each other is seen in all aspects of their lives. I saw this type of care in action with Beit Kanz, a restaurant and shop that was rebuilt after the port blast with the community's aid and, in turn, raised money to rebuild homes and schools. This community service concept was not new for Beit Kanz because it is a farm-to-table restaurant that supports local agriculture and local artisans in its shop. I also saw in the way grassroots education nonprofit organizations worked together to serve all the needs of students in Lebanon. I attended a workshop called “Exploring Alternative Learning Models for Refugee Economic and Civic Engagement” hosted by the Asfari foundation, a UK-based grantmaking foundation for the Levant region, and that was attended by LAL staff and several other regional education nonprofits. Together, they focused what they each offered for serving the education needs of the refugee population in Lebanon and surrounding areas like Jordan. Collectively, they

covered services for a student's journey through school, so their collaboration was indicative of how the community comes together to find solutions when there is no systemic response.

The distrust in government and authority in Lebanon has led to the rise of NGOs in the country. In a country of 4 million, there are approximately 15,000 NGOs (AbouAssi, 2015). In a discussion with Dr. Rasha Halat, a member of my dissertation committee, she shared that teachers have also been encouraged to collaborate at the local level with nonprofits and even diaspora, introducing new emphasis on public-private relationships (personal communication, February 24, 2025). However, this increased reliance on NGOs and nonprofits have also led to additional corruption that the Lebanese people must navigate. With only a third of the estimated NGOs registered, not all initiatives have the same oversight, creating space to take advantage of Lebanese efforts to fill in gaps left by the government (AbouAssi, 2015). For instance, some NGOs are actually run by politicians (Atrache, 2021a). Moreover, the rapid increase of the NGO, even if legitimate, has created competition for resources, instilling distrust and confusion in the community (Atrache, 2021b). Young teachers are even being swayed to leave schools because NGOs pay in dollars instead of the unstable lira (R. Halat, personal communication, February 24, 2025). The Lebanese people have resisted their corrupt government by developing a larger civil society, but even among these efforts, Lebanese people are required to navigate corruption and confusion.

Lebanon has had a difficult past that continues into the present. When I asked people in Lebanon how they were doing and how they were coping with rising conflict in the region, I would receive responses that referenced how preserving and being resilient was the Lebanon way. They were used to pushing forward despite the setbacks from the economy, corruption, or even a pandemic. A popular social media post from Issa (2024) spread during the height of

attacks from Israel in 2024, and her caption read: "A whirlwind of emotions--sadness and anger, helplessness and hope, anticipation and defeat, disappointment yet a love for life and the will to carry on. And the list goes on." The image summarized this spectrum of despair and resistance that the Lebanese people were feeling during this time as feeling "Lebanese." Understandably, they experienced a range of emotions as they described their continued perseverance. They are resilient, though no one should have to practice and demonstrate this skill so often. Highlighting their community efforts is not to glorify their need for resilience but to acknowledge the strength they have built over generations and continue to demonstrate through their care of each other. Lebanon has challenges, yet it also has challengers who will continue to serve their community. The LAL organization is an example of perseverance and innovation that can be found throughout Lebanon.

2.4 Lebanese Alternative Learning (LAL)

As an organization, LAL began in 2013 with the mission to provide access to education to those who were chronically ill and could not attend school consistently (LAL, n.d.-d). Since LAL formed, there have been many reasons why students may not be able to attend school in Lebanon. The COVID-19 pandemic prevented in-person learning, and now with the economic decline in Lebanon, schools are frequently closed or students and teachers cannot afford to attend. To support education in these challenging circumstances, LAL's organizational mission is to "design high-quality digital education programs by leveraging technology's transformative potential" (LAL, n.d.-d, "Mission" section). LAL the organization's guiding core values of innovation, equity, integrity, collaboration, and citizenship help to create comprehensive support for teachers and students (LAL, n.d.-d, "Core Values" section).

The main initiative is *Tabshoura*, which means “chalkboard” in Arabic. This digital platform was created with teachers for teachers and houses educational content aligned with the Lebanese curriculum (LAL, n.d.-c). The content is in Arabic, the official language of Lebanon, and in English and French, the main two secondary language options. The lessons for early and primary education also have an audio option to listen to instructions and content to assist with language learning and to engage students. *Tabshoura* also hosts co-curricular content to provide teachers with course materials in financial literacy, art and culture, environmental awareness, communication skills, and food and health awareness (LAL, 2023b). *Tabshoura* includes resources for nonformal education programs like social emotional learning and basic literacy and numeracy (BLN), a program to support students ages eight to 14 who are placed in a grade below their age level (LAL, 2023b). *Tabshoura* hosts inclusive content for courses beyond the standard requirements.

In LAL’s 2023 annual report, LAL staff reported that 60,000 people have used the platform and the 1,137 units they published on *Tabshoura*. They have trained over 3,000 teachers, 7,100 students, and 33 public schools. They have also worked with 32 NGOs (LAL, 2024). They have accomplished this with the help of their partnership with GIZ, the German Agency for International Cooperation GmbH, and BMZ, the German Federal Ministry of Economic Cooperation and Development. They have also received support from organizations like Malala Foundation (LAL, n.d.-a). Finally, the LAL organization has been able to fund itself through their “Solutions” division, which offers co-creation and capacity-building workshops to clients like World Vision and War Child (LAL, n.d.-b).

LAL staff created *Tabshoura* to support teachers and students to continue to learn even when crises may prevent consistent access to schooling. Their intentions for *Tabshoura* will be

further explored in Chapter 5 findings. LAL staff's expertise on the circumstances of Lebanon and of those who use *Tabshoura* also contributed to this study, which I will discuss further in Chapter 4 about the methodology.

Chapter 3 Literature Review

In this chapter, I will first explain how UNESCO's definitions and promotions highlighted inclusion and participation as a key aspect of OER. I will then explore the terms of being "open" through example cases that focus on how educators in the Global South engage with OER to better support their educational needs and goals. As the review in this chapter will demonstrate, there is a need for increased understanding of local participants engaging with OER to ensure that all, including those in the Global South, are considered and valued as active participants in shaping how OER are "open." Atenas (2020) states that "open" should not mean "follow[ing] a rule that tells you if you are open enough according to someone else's agenda, so just be open, under your own terms" (p. 75). This chapter will explain and showcase local participants' engagement with OER for their own purposes.

3.1 OER as Inclusionary and Participatory

OER were defined as universal resources available to all in 2002 at the UNESCO Forum on the Impact of Open Courseware for Higher Education in Developing Countries. The participants at this forum defined OER as "the open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes" (UNESCO, 2002, p. 242). Throughout UNESCO's meetings and recommendations, the participants defined OER with social justice goals. In 2012 at the UNESCO Paris Declaration, participants associated the goals of OER with those of the Universal Declaration of Human Rights. OER were seen and promoted as an

opportunity to provide equal access to education. This conceptualization of OER was furthered with the Ljubljana OER Action Plan 2017 at the Second World OER Congress to support UNESCO's Sustainable Development Goal 4 (SDG4) for Quality Education. There was a focus on the capacity to engage with OER with considerations for language and culture in developing conducive policies for equitable uptake. In contrast to the original forum in 2002, multi-level stakeholders were invited to attend this OER Congress, so from librarians and educators to policy makers and intergovernmental organizations, more voices were included at this session of OER planning. Finally, in 2019, UNESCO adopted the Recommendation on OER where OER was still defined similarly, but the recommendations emphasized inclusion and participation of the users through its focus on improving quality, growing international collaboration, and supporting capacity building (UNESCO, 2019). Ossiannilsson (2023) summarized the latest recommendations as supporting “the development and sharing of openly licensed learning and teaching materials that benefit students, educators, and researchers worldwide” (p. 18).

UNESCO's definitions have focused on the social justice orientation that is often associated with open education (Ivory and Pashia, 2022; Roberts-Crews, 2023). This emphasis is especially clear in how participants defined OER at UNESCO's 2nd World OER Congress in 2017 in Ljubljana:

Toward the realization of inclusive Knowledge Societies, Open Educational Resources (OER) support quality education that is equitable, inclusive, open and participatory.... OER are a strategic opportunity to improve knowledge sharing, capacity building and universal access to quality learning and teaching resources. (UNESCO, 2017, p. 1)

Inclusion and participation are defining features of “open.” UNESCO's definition describes OER as a facilitator for users to share and receive knowledge and to participate in a knowledge community. Ossiannilsson (2023) also highlighted how the stakeholders involved in advising the recommendations were inclusive of different educational sectors from teachers and learners to

policy makers and publishers. More voices were included and valued in the development and as the overall suggestions of these recommendations.

When studying OER for refugees' higher education, Class et al. (2023) describes "open" as "based on transparency and freedom as essentials within an ethics of participation" (p. 53). First, OER are freely accessible with the freedom to use as needed and as designated. Open licensing like Creative Commons (CC) are widely used to designate if and how work is "open" (Karakaya & Karakaya, 2020). There are different types "open" that a creator or author can choose. Wiley's 5Rs (2014) reflect the different activities that are allowed by the CC licenses, for work with a CC license can be retained, reused, revised, remixed, and/or redistributed. Second, how OER are designated as "open" is determined by the "ethics of participation," for those who engage with OER are participants in forming these resources. Ossiannilsson (2023) describes this participation as "democratiz[ing] education" because anyone can participate in accessing and contributing to OER to support their learning (p. 21). Contributing to the "ethics of participation," Watters (2020) explains that there have been many attempts to further explain and regulate how OER are "open": "the definition and designation of 'open' is fraught. Incredibly so. Even among those of us who consider ourselves advocates for openness in some form or another, we still scrap over which what counts as really truly 'open'" (p.13). Beyond licensing and Wiley's 5 R's, the leaders of open education debate the meaning of "open" because the goal is not a singular, all-encompassing definition of openness—it is not even desired (Weller, 2014). Therefore, there are opportunities to question, explore, and develop this term to better support the participation in democratizing education.

Two of the latest OER conferences had themes that questioned the purpose of openness for all users: the theme of OE Global 2024 was "Open is Everyone's Business" and Open

Education 2024 was “It’s about Time.” Like UNESCO’s definitions, these conferences recognized the need for more inclusionary practices in openness. Reevaluating how “open” is defined and designated at these conferences is important in order to broaden the engagement with “open.” To do so, acknowledging and understanding the local participants who engage with OER is needed. Adam (2020b) interviewed the designers of Massive Open Online Courses (MOOCs), a specific kind of OER, about how they defined openness and found that identity could not be separated from how someone viewed and engaged with openness. Life experiences, political leanings, personal backgrounds, and academic backgrounds influenced how those engaged with openness defined and understood it. For instance, a designer from the computer science and mathematics department focused on open licensing while another designer with a background in history, development studies, and anthropology viewed openness as a collaborative effort. An individual’s background determines why and how someone engages with OER. These individuals shape the OER, so open is not something to do but is something to be, or as Adam called it “embodiment of openness” (p. 181). MOOC designers in Adam’s study were not only “creators of OER” but “they are OER...in themselves” (p. 181). Who is engaging with the OER determines what these resources are, so as Adam points out, studying only certain individuals and their use of OER limits the how OER are understood. Related, Bali (2022) uses the term “entangled openness” to describe how openness relies on individuals. Her concept has three key features:

I suggest that having an attitude of orientation towards openness (also knowing when *not* to be open), as well as a well-formed praxis of social justice, and not just a theoretical understanding of it, are needed together with digital literacies to make an open educational practice achieve its goals. (p.8)

She described how OER’s success is dependent on the teachers who engage with the OER.

Openness relies on how they embrace the concept, how they incorporate social justice in their

use of OER, and how they prepare for the abilities needed to create accessible and adaptable resources. Her explanation furthers the importance of individual knowledge for engaging with OER, for the OER will vary depending on the team and their understanding of openness, social justice, and digital skills. OER is defined by why and how the team works together.

“Embodiment of openness” and “entangled openness” furthers the importance of including local participants in the engagement of OER because the more people and their way of thinking are valued in openness, the better their OER practices can be supported to serve their purposes.

How local participants engage with OER still needs to be studied because those who utilize open education and OER are the same people who already have the ability to access traditional forms of education and knowledge (Farrow, 2015). This imbalance is seen in the creation of OER with only 1% of English repositories of OER from Africa and almost all the rest developed in Europe and North America (Santos-Hermosa et al., 2017, as cited in Adam, 2020b). Adam (2019) studied the production of MOOCs in 2017 and found that only about 7% of the Coursera’s courses were from the Global South. From the global online content, 0.4% is produced in Africa; without South Africa, this number becomes 0.02% (Gray, 2007, as cited in Kanwar et al., 2010). Cobb (2018) found that OER frequently originating from a Western perspective means that Western values were present throughout the materials as well. Cobb analyzed Open Educational Resources for English Language Teachers (ORELT) modules, which are used to train English teachers in low-income countries the learner-centered pedagogy, and concluded “OER are not a neutral pedagogical platform” and contain cultural beliefs and values (p. 23). Piron (2017) explains that this imbalance in participation in openness frames OER only as “a means of catching up” for Africa, which is deemed as “lagging behind the modern world” (as cited in Nobes, 2017, para. 29).

However, Mason (2011) distinguishes that the imbalance in engagement with knowledge sharing is also because the focus is on widely distributed and promoted knowledge. Instead, Raju et al. (2020) expands on Mason's concern by explaining that while the knowers in the Global South may not be included in the popular OER, they still participate in openness. For example, Raju et al. (2020) describes how University of Cape Town in South Africa has established its library as a publisher, meaning that it provides open access to scholarly resources and to the production and dissemination of their own knowledge. This library service supports local academics in creating their own materials and participating in the knowledge community instead of only providing content created in the Global North. There is an imbalance in those participating in resources widely recognized as open, but there are more individuals, including in the Global South, engaging with OER, even if may not be labeled or recognized as "open." As Hollich (2022) said, "we cannot analyze OER in a vacuum" (p.14), so there is a need for contextualized meanings of openness. This study will consider how individuals in the Global South participate and engage with OER, even if not officially labeled "open," for their embodiment of openness still serves their purposes and contributes to democratizing education.

3.2 Cases of Inclusion in OER

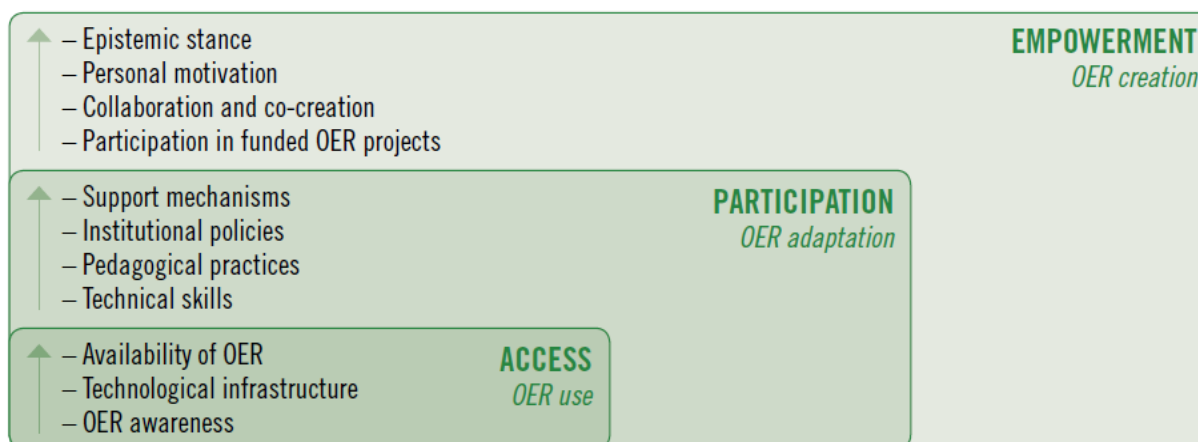
The rise in OER was to "make learning materials available to anyone who could change, modify, or redistribute the material" (Olivier & Rambow, 2023, p. 3). The focus of this dissertation lies in the "anyone," for this democratization of education materials outside the Global North is not as studied. As scholars like Adam (2020b) and Bali (2022) have argued, there needs to be a closer look at individuals and their cases of OER to understand how localized OER have supported their needs and goals. In this section, I provide examples of cases of OER in the Global South where individuals who are the ones using OER were included in the

development and the continued engagement of the resources. I use Arinto et al. (2017) to discuss the different ways local participants are engaging with OER and to indicate to what degree they are included in modifying the OER. These cases explain how the inclusion of “anyone’s” first-hand knowledge and experience helps build access to quality resources.

First, Arinto, Hodgkinson-Williams, and Trotter (2017) defined engagement with OER using a social inclusion approach to understand how and where local participants’ voices can be included and valued in developing and using OER. Arinto et al. were a part of ROER4D (Research on Open Education Resources for Development), a project in the Global South that studied OER adoption, adaptation, and creation case studies. Figure 1 shows the degrees of engagement as Arinto et al. (2017) described, starting with access.

Figure 1

Levels of Social Inclusion through OER Use, Adaptation and Creation, with the Structural, Cultural and Agential Factors that Impact on Each Type of OER Engagement



Note. Reprinted from “OER and OEP in the Global South: Implications and recommendations for social inclusion,” by Arinto, P.B., Hodgkinson-Williams, C., & Trotter, H., 2017, In C. Hodgkinson- Williams & P. B. Arinto (Eds.), *Adoption and Impact of OER in the Global South*, p. 577-592, Cape Town: African Minds Publishers.

The first level focuses on accessing OER. Users need to be aware that OER are available, and the technology needs to support the use of the resources. First, users’ different technological

capacities means that openness cannot solely rely on the same technology for all users to have the proper support to engage with OER. Tang and Bao (2020) used 675 survey responses from K-12 educators in 180 countries conducted by the OER Research Hub (OERRH) to study the challenges that educators faced in accessing OER for their classroom curriculum. Tang and Bao categorized the challenges as “digital divide” with two levels: “access to technology” and “technical skills capacity” (p. 2). The first level of the digital divide places the emphasis on the technology and its ability to provide access to “educational emancipation” automatically (Gallagher and Knox, 2019, p. 227). Different circumstances will require different kinds of technology, though, with issues with reliable Internet and electricity needing to be considered. Then, the second level of the digital divide focuses on the capacity of those engaging with OER to participate in the ways in which they want and need. Both the need for technology and the ability to engage with OER will depend on the circumstances of the users, so their knowledge is vital for the logistics of using OER. However, at this first level of the social inclusion model, centering voices into the full design and creation of the OER is not emphasized yet, so agency and ownership are not the main goal. It is first imperative that users have the technology and the skills to access OER.

Then, as one moves upwards on the chart, the next degree of social inclusion is centered on “participation and social justice,” which is often implemented as adapting materials to fit contextually and linguistically (p. 579). While the content of the OER should also be dependent on the users and their purposes, the content is often not created with or for users outside Western regions where English is the national language. Therefore, OER needs to be contextualized and translated, which requires time and effort that is not always available for users. The relevancy of content needs to be determined by those using the OER, but they also may require support in

adapting or creating the appropriate content. Finally, the degree of social inclusion expands to focus on empowerment through the creation of OER, for this type of activity supports teachers and students in participating in the production of knowledge. “Social inclusion means empowering educators and students to be the creators of their own materials and knowledge, not just recipients or adapters of others’ work” (p. 579). Here, this level focuses on the issues of power and agency that have been often ignored to the detriment of the quality of OER.

I used Arinto et al. (2017) as a framework for this dissertation because their social inclusion model focuses on analyzing, exploring, and understanding engagement with OER in the Global South. By following the degrees of social inclusion that Arinto et al. (2017) have mapped out in their model, I next explain examples of the participation and inclusion that UNESCO’s definitions described in and through OER. I selected the cases in Table 1 because they also attended to how local participants engaged with OER in the Global South. The OER in these cases were shaped by the local participants based on their purposes and their circumstances. In addition to the focus on the local participants, they also represent diverse regions and circumstances. I included one chapter from the same ROER4D report in which Arinto et al. (2017) participated. Three additional cases were discussed in ROER4D report, and the remaining three were not mentioned. Looking across different regions and circumstances in these cases supported understanding additional perspectives on the role of OER in service of a variety of goals.

Furthermore, Arinto et al. (2017) and these case studies examined the inclusion of participants in producing OER, which includes localization, or “where users can take a resource and easily translate, adapt and/or recontextualise it to meet local needs” (Oates et al., 2017, p. 555). Localization of OER includes modifying the resources to fit the context of use, including

translations and the contextualization of content. Jimes et al. (2013) expands “localization” as more than editing content, for it also includes “meeting local logistical constraints that impact access to information, such as limited technology and distribution channels, as well as limited student budgets” (p.81). Adapting resources to fit the technological and economic circumstances shows how localization is what Wolfenden and Adinolfi (2019) call a “social practice” (p. 328). Wolfenden and Adinolfi (2019) further explain that the quality of OER is not inherent but, instead, “emerges in the use of the OER with learners in their context” (p. 329). Localization is the social practice of considering the quality of the OER as users engage with OER to serve their needs.

Arinto et al. (2017) studied this social practice at a program level, for in these cases, participants are contributing to designing and developing OER as part of a program. All eight of these cases follow Arinto et al.’s (2017) model by engaging with OER at a program level. Two cases (Jimes et al., 2013; Oates and Hashimi, 2016) also include examples of OER at the classroom and school level, which indicates using and modifying OER to serve the user’s students. These levels are not mutually exclusive, for participants can engage with OER at the program level and classroom and school level. While I have labeled the case studies with the prevalent levels represented in the articles and studies included in the table, it doesn’t mean that there isn’t another level of engagement for these cases. The level depends on the purpose not only for using OER but also for studying OER. This dissertation is an example of OER engagement at the classroom and school level since I am focusing on LAL’s intentions for *Tabshoura* to support teachers and the teachers’ experiences with engaging with *Tabshoura* for their students.

In the specific examples in Table 1 (and in an expanded version in Appendix A), there are other similarities among the cases. Five cases included traditional teachers, while one case centered on community members becoming teachers to people external to their community. In four cases, the teachers were from primary and secondary schools, including those still training to become teachers in one case. The cases also shared collaboration with stakeholders because teachers did not engage with OER on their own. Two cases worked with local and regional universities, two cases worked with their government ministries, and three cases worked with external organizations and programs. There are also differences among the cases. I describe the different cases' features of openness in their OER, as defined by Olivier and Rambow's (2023) broad definition that began this section: "make learning materials **available** to anyone who could **change, modify, or redistribute** the material" (p. 3). The emphasis was added to indicate the categories used in Table 1. Furthermore, the reasons for engaging with OER vary, so the ways the teachers engage with OER also vary. The level of social inclusion highlights these differences among the cases, but these differences also capture how the levels of social inclusion support teachers in addressing their goals for their classrooms. The inclusion of those using the OER at any type of engagement with OER can better support the initial purpose for needing these resources that are freely available for adoption and adaptation. Therefore, focusing on different ways and reasons for engaging with OER can expand the understanding of how to include those using the resources and to better support them and their teaching.

Table 1*Case Study Summary*

Study	Population	Features of open (Olivier and Rambow, 2023)	Social Inclusion (Arinto et al., 2017)
Jimes, Weis, and Keep (2013) *	Underresourced South African high schools	-Workshops for OER use -Format of OER was adaptable -Publishers edited OER for all based on requests (<i>program level</i>)	-Use: Accessibility and Awareness considered; up to teachers on use in classroom (<i>classroom/school level</i>) -Adapt: Teachers suggested content edits
Butcher, Moore, and Hoosen (2014)	Pre- and in-service teachers for primary and secondary school in Guyana	-Facilitation guides to use OER; printed or digital OER -Feedback-informed changes and new material -Shared with other countries (<i>program level</i>)	-Use: accessibility and awareness considered -Adapt: teachers provided feedback
Abeywardena, Uys, and Fifita (2019)	Tonga Institute of Higher Education (TIHE) and the Tonga Institute of Education (TIOE)	-Policy and capacity building efforts; built tech infrastructure -Iterative course development -Courses developed were shared (<i>program level</i>)	-Use: Awareness and accessibility was considered -Create: teachers co-created OER and instructional videos; assisted with policy
Oates and Hashimi (2016) *	Underresourced and un/underqualified primary and secondary school Afghan teachers	-Tech literacy; Alternative access (mobile apps); Workshops -Iterative course development -Courses developed were shared on DD library (<i>program level</i>)	-Use: Accessibility and awareness considered; up to teachers on use in classroom (<i>classroom/school level</i>) -Adapt: Teachers translated and remixed lessons; Create: teachers added lessons
Pariyar, Kulathuramaiyer, and Bala (2021)	Single mother rural community in Bario, Malaysia	-Technology infrastructure; workshops and training -Participants co-created the MOOC -Content was added to MOOC for the purpose of sharing widely (<i>program level</i>)	-Access: Accessibility and awareness considered -Create: community members created MOOC that reflected their knowledge
Zagdragchaa and Trotter (2017) **	Faculty and admin at public and private higher education institutions (HEI) in Mongolia	-Training and consultations -Localization of existing OER -Redistribute: Intended for teachers to re-share their adapted OER but not many teachers have participated (<i>program level</i>)	-Use: Awareness considered; up to teachers on use in classroom (<i>school/classroom level</i>) -Adapt: teachers translated, summarized, remixed lessons
Perryman, et al, 2014; Buckler et al. 2014*	Primary and secondary school teachers in Sub-Saharan Africa	-Trainings and workshops -Develop OER; localizations and translations of original OER -Redistribute: OER widely shared (<i>program level</i>)	-Use: Awareness and accessibility considered -Adapt: participated in localizations -Create: co-created OER
Wolfenden & Adinolfi, 2019; Perryman, et al. 2014; Buckler et al., 2014*	Primary and secondary school teachers in India	-Trainings and workshops -Develop OER; localizations and translations of original OER -OER widely shared (<i>program level</i>)	-Use: Awareness and accessibility considered -Adapt: participants localized content -Create: co-created OER

Note: The chapter from ROER4D is marked with ** and the 3 additional cases discussed in the same study have *.

3.2.1 Use and Access

First, all the cases in Table 1 are examples of local participants using OER for their own purposes. The teachers in these cases are accessing the OER to meet their goals. While each case is an example of this level of social inclusion, they also represent different reasons for using OER and the different challenges in using OER. First, Jimes, Weis, and Keep (2013) provide an example of how the local origins of the content and flexibility of the format helped their use of OER. In this case, three South African high school teachers accessed open access textbooks for teaching math and science in under resourced high schools through a South African initiative called Siyavula. With local experts like university faculty creating these textbooks, the high school teachers were able to access resources that were made with local knowledge and that reflect the context. One teacher from this study said that having resources locally produced “really made a difference” (p. 77). He explained that with multiple languages spoken in his class, the local authors of the textbooks responded to these circumstances with language that was “accessible to second language speakers” (p. 77). Furthermore, another teacher from this study said that knowing a team from prestigious South African universities created the OER established the credibility of the resources. In this case of Siyavula, the teachers wanted to use the OER because the local team of authors created a trustworthy and relevant resource. The teachers also had the capacity to access these resources because they were able to print the digital resources. With unstable Internet access and limited computers, the format of the OER was important for increasing the accessibility for their students. The printed books were also low cost, which meant students could afford to keep the materials, make notes on them, and use them for future courses instead of needing to resell. To use OER in this case meant the authors had to

support addressing digital divide and consider how teachers and students could access OER reliably and could afford to maximize the use of OER.

Acknowledging the local infrastructure and economic conditions of the classroom supports local OER users to have the capacity to engage with OER. Butcher, Moore, and Hoosen (2014) also studied a case in Guyana where pre- and in-service teachers had access to OER but did not have the technical capacity to engage with them. The Ministry of Education partnered with university faculty to select and curate OER to align training for teachers with UNESCO ICT Competency Framework for Teachers (CFT). However, the teachers provided feedback that unreliable internet prevented them from working with OER, so the Ministry of Education adapted the format to either paper-based materials or stored them on CDROM. The inclusion of those who are engaging with OER is necessary for ensuring that the OER is accessible.

This first level of social inclusion also lists awareness of OER as important for the accessibility and use of OER. The user might know a resource exists for them to use and have the technical capacity to use them, but if they do not understand what makes the resource “open” in this case, they might not take advantage of the opportunities that the creators of the OER intended. Potential users have had confusion or even fear when introduced to OER because their concept of freely sharing materials they created does not match their plans. For example, Ngimwa and Wilson (2012) explained that some potential OER users in Sub-Saharan Africa were reluctant to share digitally instead of orally, as they were accustomed to. They expressed that they did not want to lose control of their intellectual property or lose the opportunity for compensation for their work. They also were wary of sharing the content they created because they did not know what scrutiny to expect from sharing their work widely. ROER4D also found that some educators were anxious about the potential critical review that they could receive from

colleagues, but others found more satisfaction since they believed sharing openly would benefit others and their own reputations (Arinto et al., 2017). The range of perceived potential consequences from using OER to share work can also be tied to how there are different interpretations of the quality of OER: it is either “high” since it is often created by institutions or “low” because it is cost-free (Wolfenden & Adinolfi, 2019). Having an understanding of openness that does not match with one’s circumstances means that potential users do not see how engaging with OER will support their plans. OER are not viewed as useful to them.

It is important to understand the intention behind choosing OER to address challenges in education. In the UK Open University’s TESS-India project, the goal was to train and support the local participants in India to localize teacher training materials that complemented the established textbooks for primary language and literacy and primary and secondary math, science, and English (Wolfenden and Adinolfi, 2019; Perryman et al., 2014; Buckler et al. 2014). As Wolfenden and Adinolfi (2019) described, the participants who joined the workshop were selected because they had prior experience in textbook design and writing, and they knew how to translate the resources. They either were or had been teachers, teacher educators, or state officials. Furthermore, some participants had first-hand knowledge of the issues teachers currently faced in the classroom, and this experience would help the participants understand what kind of changes OER may need to fit in their context. However, the local participants were not convinced they were allowed to make many changes to the existing content and did not want to deal with the “OER stuff” (Buckler et al., 2014, p. 228). This experience showed that even with plans established for content contextualization, the lack of understanding or even dismissal of OER can still be a barrier. How people view the concept of openness will affect how people use OER.

Zagdragchaa and Trotter (2017) conducted a study on the uptake of OER in Higher Education Institutes (HEIs) in Mongolia, and they found that OER engagement had not yet emerged since only isolated individual educators are adopting OER. From the 76% of their 42 survey participants who responded that they had not participated in creating and sharing OER, 25% gave the same reason: “such sharing is not common in my discipline” (2017, p. 408). From this study, localization of technology and content was not enough to encourage or support engagement, for there needs to be a “culture of contribution” established (2017, p. 408). Wolfenden and Adinolfi (2019) explain that the culture of contribution should support relevant OER that is reflective of multiple beliefs and values. “[I]t is time to collapse the boundary separating....materials-user and materials-creator” (Arinto et al., 2017, p. 579). Potential OER users need to understand why and how to engage with resources that are open so that they can contribute and share their knowledge in ways that are appropriate and useful for them and their goals.

3.2.2 Adaptation and Participation

Second, the adaptation level of the social inclusion model means that the users of the OER are participating in the contextualized and localization of the materials to ensure they are relevant to their purposes. The cases in Table 1 have participated in adapting OER in different ways. The Teacher Education through School-based Support (TESS-India) and Teacher Education through School-based Support in Sub-Saharan Africa (TESSA) programs are examples of how an external stakeholder (Open University UK) supported and trained teachers to make current and future edits to the content. In TESS-India, the Open University UK helped the local teachers in India to localize teacher training materials that complemented the established textbooks for primary language and literacy and primary and secondary math,

science, and English (Wolfenden and Adinolfi, 2019; Perryman et al., 2014; Buckler et al., 2014). The facilitators of this workshop worked with the local participants by localizing the content together, which consisted of adding supplementary materials, connecting the content to state educational materials, and translating “structures, idioms, terminology, and social relations embodied in their respective language or variety” (Wolfenden and Adinolfi, 2019, p. 336). Some terms that were contextualized were “names, locations, local vegetation, and musical instruments” (p. 336). Overall, the goal was to localize the materials so that the participants could easily recognize and connect to them (Wolfenden and Adinolfi, 2019). For example, they incorporated their students’ lived experiences in the math lessons by adding an activity that relied on marbles since these were a familiar toy. They also added cultural stories like local fables to support literacy. This type of localization not only creates more relevant and useful resources, but it also values the local participants and their knowledge and invites them to engage with and lead OER initiatives. In TESSA, teachers also adapted and contextualized content with the support of the Open University UK, but this time the university was more involved and increased the number of changes made to the OER (Perryman et al., 2014). While increasing the support from the external OER developer may seem counterintuitive to the participation level of the social inclusion model, the university was intentional and flexible in offering the support that was needed and wanted by the local OER users. For instance, the UK Open University responded to the TESSA participants’ desire for training in technology to build skills and confidence. “[C]ollective engagement in localisation may nevertheless lead to the emergence of new ways of working, while facilitating actions to respond to mutual problems of practice” (Wolfenden and Adinolfi, 2019, p. 341). This example shows how the facilitators recognized the needs of the local participants and adjusted their support in the workshop accordingly so that the

knowledge holders and their plans were still centered. While the users need to be considered when adapting OER, they do not have to participate alone.

Another approach to adaptation was shown through Oates and Hashimi (2016) with the Darakht-e Danesh Online Library (DDL) for supporting teachers with materials to contribute to teachers' subject knowledge and methodologies in the classroom. An external organization, Canadian Women for Women in Afghanistan (CW4WAfghan), curated and adapted OER for DDL. They used existing OER that required translations into Dari and Pashto, received permission to use materials from other organizations, government agencies, and publishers, and accepted materials from users. With many of the OER in this library originating in English, CW4WAfghan focused on translations. This necessary adaptation of resources included not only direct users but also the Afghan diaspora. This population have knowledge of the content and context, despite no longer being in the country, so they were able to localize the OER (and also access it for their own learning). Different types of stakeholders were involved in participating in the adaptation of this OER, but the contextualized knowledge was still centered in order to create relevant and useful educational materials for themselves and for their fellow teachers.

3.2.3 Creation and Empowerment

Third, creating OER is labeled as empowering the user to direct the engagement with OER. Creation is represented in several of these cases, even in cases that had strong examples of users accessing the materials “as is.” With the examples from Abeywardena, Uys, and Fifita (2019) and Oates and Hashimi (2016), the teachers accessed OER for their purposes, but they were also able to create content and have it reshared as part of the OER. They were contributing to OER with a distributed perspective. First, Abeywardena et al. (2019) studied an OER policy in Tonga that worked to mainstream OER to support students prepare for higher education and for

future employment opportunities. The Commonwealth of Learning (COL) was asked by the Ministry of Education and Training (MET) to work with tertiary educators to co-create OER, so these local knowledge holders filmed and shared short instructional videos. The local stakeholders were involved in creating OER and in developing technical skills for continued engagement with OER. Abeywardena et al. (2019) said that the local participants were “‘surprised and empowered by the new skills they have gained’ and would utilize the medium of video more in their content delivery” (p. 271). The trainers took into consideration the participants’ knowledge of using technology and helped them gain the skills they needed to continue directing the use of OER for their self-determined goals. Second, Oates and Hashimi (2016) also showed how to include local knowledge holders when creating content. As mentioned, CW4WAfghan curated OER from other organizations, but they also asked and received OER from local users. Teachers responded with submissions like mini video lessons to be included and reshared on the DDL. The inclusion of local users in creating content better ensures that they can access and utilize OER the way they want and need.

In the study conducted by Pariyar, Kulathuramaiyer, and Bala (2021), the users’ role in creation is represented differently. In this study, the reasons for engaging with OER were defined by the local community from the beginning. Specifically, this case is an example of users contributing their knowledge to create OER not to use the resources themselves but to share their knowledge with other OER users. The single mother community in rural Bario, Malaysia, adapted existing MOOC models to create “Community-led MOOCs” to preserve their knowledge. With an influx of tourists, the community wanted to learn how to develop new economic opportunities and how to maintain their culture, especially the history, knowledge, and skills of the Kelabit beads in their community. This “Community-led MOOC” model was used to

transform the traditional MOOC model from a unilateral, top-down knowledge production to a model that values bidirectional knowledge partnership that centered the local epistemologies (2021, p. 96). This community expanded how OER could serve their purposes. Pariyar et al. took on the role of mentor and trainer for the technical aspects of creating a MOOC and allowed the single mother community to be at the center of knowledge production for the MOOC. Instead of only focusing on the text as knowledge, their OER captured their way of understanding by including approaches such as singing, dancing, and storytelling. Pariyar et al. were deliberate in changing the unilateral direction of knowledge that many OER had followed because “[r]eplicating such a model [existing MOOC model] for rural communities fails to bring a fresh perspective to address unresolved global problems by integrating local knowledge which the local community has carried for generations” (2021, p. 106). By the community leading the development of their MOOC, the local knowledge holders were empowered to focus on their knowledge in all forms. Creating OER in this case was less about contributing to a standard MOOC format but, instead, the local users embraced a way of sharing knowledge that better served the community and their goals.

3.2.4 Summary

The cases of OER in this chapter have been localized in the Global South. They do not represent all the different engagements with OER in these regions, but they do introduce how and why teachers are using, adapting, and creating OER in understudied circumstances. The teachers and community members engaged with OER in response to issues they were navigating in their classrooms, schools, and communities. In Oates and Hashimi (2016), the catalyst for DDL was not openness in general, but Afghanistan teachers needed access to resources that would support teacher training after many years of governmental repression. In Pariyar et al.

(2021), the community needed to balance the increased tourist attention with maintaining their culture. They created a MOOC to share their knowledge and ways of knowing as a digital museum. Having resources that were open was not the goal, but OER supported their goals. Including users in the process of developing and implementing educational materials improved the accessibility and quality of the resources. As Jimes et al. (2013) said:

On the whole, the findings support nascent, prior research revealing that when open educational resources (OER) are created, developed, and evaluated through processes drawing upon individuals who live and work within the context for which the OER are being created, the end result is more useable. (p. 73)

Through the social inclusion model from Arinto et al. (2017), these cases demonstrate how the inclusion of the local participants who will use and benefit from the OER improves the quality of the materials at the program level and the classroom and school level. First, establishing with the users the intention of engaging with resources as open helps the overall uptake. Then, the local stakeholders in these cases contextualized the resources through their preferred ways of accessing the resources, through the adaptations of the OER's content, and through their creation of lessons and supplementary materials that were added to the OER. Finally, the involvement of local participants has improved the quality and relevance of the OER for them and their circumstances. In the next chapter, I will explain how I studied a similar case study of social inclusion in OER engagement at the classroom and school level to understand how teachers engage with re-localized OER to better support their students in challenging circumstances.

Chapter 4 Research Questions and Methodology

This dissertation is a case study of OER that was created locally by LAL for teachers to provide their students with consistent education in unstable circumstances. Furthermore, this case study is a “made” case, meaning I selected the LAL organization and its *Tabshoura* as a case of localized OER even though LAL does not describe *Tabshoura* as open. As Ragin (1992) explained, I make this case by “pinpointing and then demonstrating” how *Tabshoura* is open and then connecting the case to its “theoretical significance” (p. 10). My research design is consistent with Ragin’s notion of a made case, for my research questions center on understanding how *Tabshoura* is “open” as presented by LAL and then as engaged by the teachers. Then I find the theoretical significance by following the “process orientation” of a case study to understand how LAL’s intentions and the teachers’ practices with *Tabshoura* as OER connects to their goals for the students in Lebanon (Maxwell, 2013, as cited in Bartlett & Vavrus, 2017, p. 8).

I utilized several methods to capture LAL’s and the teachers’ experiences. First, to learn about LAL as an organization, I developed a relationship with the staff of LAL through video-conferencing discussions, documentation on their website, and teacher professional development resources. I then visited Lebanon and spent time with them in their office space, including interviews with staff members and observations of their internal team meetings and with external partnerships. Second, I learned from teachers through photovoice, a participatory approach to data collection and analysis, and through additional interviews and observations with teachers who did not participate in the photovoice project. Photovoice includes several points of

collection: photos and captions submitted by teachers in response to a prompt, interviews of teachers, and observations of teachers using *Tabshoura* in their classrooms. Photovoice provided the opportunity to hear directly from the teachers about their experiences with *Tabshoura*. I also supplemented photovoice by including teachers who did not participate in submitting photos and captions. I interviewed these additional teachers and observed their classroom teaching.

In this chapter, I will discuss how this case study is a “made” case about LAL as presented by the developers of *Tabshoura* and engaged by teachers as the users of this platform. I will then discuss how data was collected and analyzed to understand the two perspectives of *Tabshoura* as “open.”

4.1 Research Questions

UNESCO’s (2017) definition described OER as facilitating access to quality education and participation in knowledge sharing. This case study seeks to understand *Tabshoura* as “open” by addressing the following questions:

1. *How is Tabshoura “open” as presented by LAL?*
2. *How is Tabshoura “open” as engaged by teachers?*

In this study, these questions were applied to LAL the organization and teachers in Lebanon who were navigating an economic and refugee crisis in 2023-2024.

4.2 Research Design

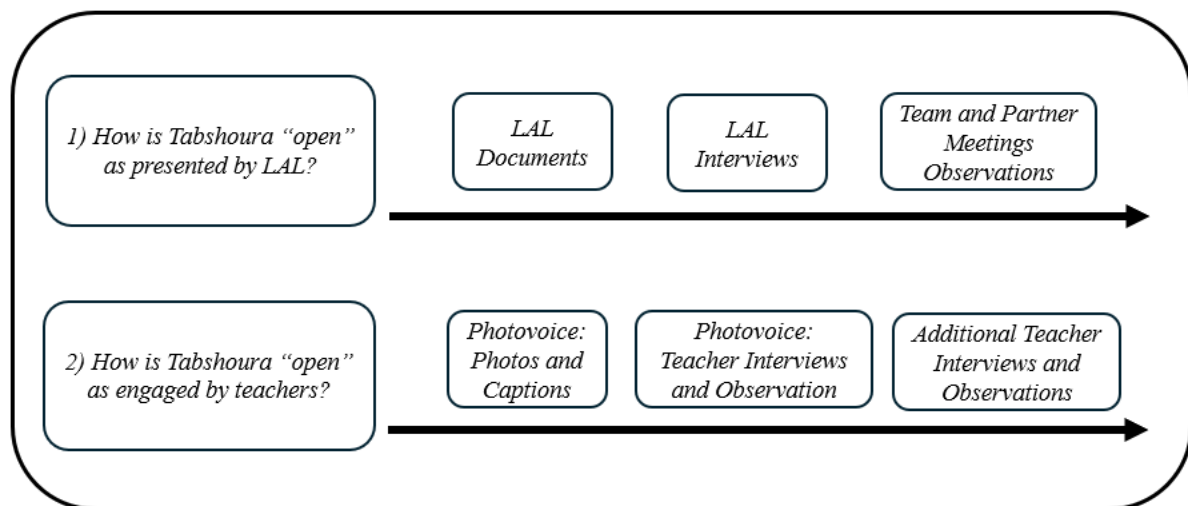
This study is a case study of localized OER in Lebanon. As an organization, LAL developed *Tabshoura* as a digital platform to support teachers respond to their challenging circumstances. LAL the organization had intentions for the use of *Tabshoura*, and the teachers then integrated the platform into their practices. Both LAL the organization and the teachers in this study are engaging with OER to address the inequities the students of Lebanon face in their

education, and they both have an understanding of what engagement with the platform looks like to work towards the shared overall goal. In this case study, I focus on these two perspectives on *Tabshoura* and its role as an OER for education.

First, I studied the intentions LAL has for *Tabshoura*, and then I studied the practices of teachers using *Tabshoura* in their classrooms. These two strands of the case study reflect the two research questions and require their own approach to data collection and analysis, as represented by Figure 2.

Figure 2

Case Study Research Design



The first question is about how LAL presents *Tabshoura* as “open.” This strand required an understanding of LAL as an organization. “Drawing from ‘the empathy of ethnography,’” I immersed myself in the LAL the organization (Miller, 2009, p. 20). This approach was informed by ethnographic methods to learn more about LAL and their goals. I used several methods including document review, interviews, and observations during my month-long visitation to Lebanon and LAL’s office space.

The second question is about how the teachers engaged with *Tabshoura* as “open.” For this strand, I used, in large part, photovoice to capture the voices and experiences of the teachers. Caroline C. Wang and Mary Ann Burris (1994) first developed this term with their work with women in rural China to reach populations historically not included in research. Similarly, I used photovoice for this study to support these teachers, whose use of OER is understudied, in sharing their specific experiences with *Tabshoura*. What makes photovoice appropriate for this study is its three theoretical foundations: “(a) education for critical consciousness (e.g., Freire, 2007), (b) feminism and notions of voice (e.g., hooks, 1981), and (c) participatory documentary photography (e.g., Ewald, 1985; Hubbard, 1994)” (Latz et al., 2016, p. 126). In particular, the Freirean approach to the local community focuses on participants sharing their experiences for change in their communities (Wang and Burris, 1997). Photovoice emphasizes the power that participants can have when they are included and centered in the research design. The attention on local, first-hand knowledge of an issue in a community changes the power dynamics. Those who were previously ignored or dismissed before are now welcomed as authorities. Call-Cummings and Hauber-Özer (2021) summarizes photovoice as “commitments to creating space for knowledge creation by and for those who are closest to and most knowledgeable about an issue, problem, or phenomenon” (p. 3229). The relationship I built with the LAL team meant that the role of the participants in the study was different and not as directing as intended in photovoice. LAL staff acted as mediators between the teachers and me, so in this study, the teachers shared their knowledge through submitting a photo and a brief caption in response to prompt and participating in interviews and classroom observations. The teachers in this study contributed to the research by sharing their perspectives and stories instead of only responding to pre-determined questions.

4.3 Data Collection and Analysis for Research Question One about LAL's Intent

In this section, I will explain how I collected and analyzed data to address how *Tabshoura* is presented as “open” to support teachers. For this question, I took an ethnographic approach, so I will first detail how I developed a relationship with LAL the organization and learned how this study could support them.

4.3.1 Selection for Research Question One

I selected an organization for this study, who, in turn, had to select me as a researcher. I began this selection process by building a relationship with LAL staff and immersing myself in their organization. In November 2022, I was introduced to LAL staff through Dr. Rasha Halat who became a member of my dissertation committee. Dr. Halat had previously worked with LAL on a project and thought their creation of *Tabshoura* with and for teachers was similar to what I was interested in studying.

LAL staff members and I spent almost a year getting to know each other through email and videoconferencing before I traveled to Lebanon. This time helped me learn more about LAL as an organization and about how research like my study could support their next steps. My main contact was LAL's Monitoring, Evaluation, Assessment, and Learning (MEAL) Manager. Two content managers would also join our conversations. From these conversations, I learned that LAL the organization had spent the previous year developing many partnerships and helping teachers to engage with the platform. Now, they needed an understanding of how the platform was being used in the classroom in order to continue to grow. In December 2022, LAL staff connected me with the CEO and co-founder of LAL, who agreed that we should collaborate, and then we spent the next nine months designing a research study that would help them understand how teachers experienced *Tabshoura*.

The relationship with LAL then continued when I visited in September 2023. I learned more about LAL and their goals by being able to spend time in their office space and observe their daily operations and internal team meetings. They treated me as if I was another team member and even provided me with a desk while I was there. I was included in the lunch breaks and in team social activities. I learned more about LAL staff as individuals and as a team, helping me to better understand the motivations and goals for *Tabshoura* and their other programs. Communication, especially with the MEAL manager, continued after my visit as well. I was able to follow up with additional questions and clarifications. Building a relationship with LAL was important to better understand them and their expectations of *Tabshoura* for the teachers and students in Lebanon. I have worked with them since November 2022, and during these two and half years, I learned more about them and their initiatives as circumstances continued to evolve.

4.3.2 Data Collection for Research Question One

In my two- and half-year collaboration with LAL, I collected data from several sources. First, in the months leading up to my visit in September 2023, I relied on my online conversations with LAL staff and on documentation. The discussions with LAL staff focused on learning about each other and about planning the research study. From this time online together, I gained insight into LAL the organization and took fieldnotes. I had several sources for the documentation I reviewed. From the website for LAL, I had access to publicly available information like their mission statement, history of the organization, program descriptions, and their annual reports. I also reviewed news stories that were available on their partners' websites. A LAL staff member shared additional materials that were not openly published like PowerPoint slides used in their trainings and promotions of *Tabshoura*. Finally, I followed LAL's official

social media accounts to learn about their reactions to circumstances changing quickly and their plans to continue to support teachers and students.

Second, I collected data from interviews and discussions with LAL staff members and their partners before and during my visit to Lebanon. The conversations with the LAL team both online and in person provided me with more detail on how LAL operates and how they view *Tabshoura*. When I visited schools for observations of teachers using *Tabshoura*, I was able to talk to administrators and LAL staff members about the partnership between schools and LAL the organization. In particular, I visited a semi-private school for Armenian students where a LAL staff member also teaches. I was able to interview her about her understanding of *Tabshoura* and future goals for LAL the organization. I would document these online and in person conversations in fieldnotes.

Third, I observed LAL's internal team meetings and external meetings with partners. For instance, LAL staff allowed me to attend a meeting with one of their partners, Teach for Lebanon (TfL). LAL the organization and TfL collaborate to train new teachers about how to use *Tabshoura* to facilitate pedagogies like blended learning and learner-centered education. I was not able to attend teacher trainings while I was in Lebanon since public schools were delayed in opening, but LAL staff invited me to join their first webinar to introduce and demonstrate *Tabshoura* to interested teachers across Lebanon as part of a campaign to increase awareness while teachers were waiting for schools to open. Finally, when I visited the semi-private Armenian school, I also observed a professional development training, partly hosted by the LAL staff member who is also a teacher. A portion of the training was dedicated to using *Tabshoura* to facilitate a learner-centered pedagogy. These observations covered different aspects of how and why LAL the organization worked to increase use of *Tabshoura*.

4.3.3 Data Analysis for Research Question One

I maintained a log of field notes and memos during my time with LAL and their partners. I used my field notes from these documents, discussions, interviews, and observations to expand my understanding of LAL and their purpose for *Tabshoura*. When I triangulated these field notes and memos, I developed categories based on time to understand the current goals and future intentions for *Tabshoura*. There were three phases that highlighted how LAL presented *Tabshoura* as “open”: during the development of *Tabshoura*, in the current examples of expected use of *Tabshoura*, and in the continuous development of *Tabshoura*. Furthermore, within the expected use of *Tabshoura*, I used the types of OER engagement—use, adapt, and create—from Arinto et al. (2017) to understand what LAL intended teachers to do with the platform. I organized my materials into these categories and then I reviewed across the different materials to understand the fuller picture of the LAL team’s view of the platform’s purpose and how they invited and included teachers throughout these phases.

As an example, I attended a meeting between LAL staff and TfL staff as they planned their upcoming joint professional development for TfL teachers. They were collaborating on a training process for TfL teachers to learn the blended learning model and to become trainers for non-TfL teachers. I was able to observe LAL and TfL staff discuss how to use *Tabshoura* to facilitate what they called a “cascading model” of teachers supporting teachers. I captured the following points in my fieldnotes:

- *Tabshoura* is a “comprehensive resource bank” to help the facilitator “fill the gaps” and conduct blended learning.
- Want training in case schools are open but then close (e.g. finish training before Christmas because the strikes last 2-3 months after the holidays last year)
- Teachers can still keep up with students and students stay engaged.
- Offer, not ask, teachers to participate (already overworked and underpaid)
- Only take steps they want.

Similarly, when I looked across the data I saw similar points. In the webinar LAL staff hosted for teachers who were interested in *Tabshoura*, the platform was described as “learning tool for teachers to track students.” “Tool” and “filling in gaps” were repeated phrases in my conversations with LAL staff in their office spaces as well. From these notes, I began to understand how LAL currently views *Tabshoura* as a tool for teachers to maintain connection and support for students. Additionally, LAL expected teachers to use *Tabshoura* as needed and “as is.” These discussions of teachers using the platform centered on accessing the “comprehensive resource bank” and “filling in gaps” for students’ learning. Teachers were expected to decide how to use *Tabshoura* but not to adapt or create further materials.

Studying across my notes, I also categorized descriptions of how LAL staff saw the future of *Tabshoura* and the future approach to including teachers. In the meeting with TfL, LAL staff also discussed the additional need for “building a blended culture.” I saw this attention to relationships among teachers in another professional development training led by a LAL staff member who is also a teacher as she led her fellow teachers in a training about *Tabshoura* and *LALmoudaress*, for she described the need “to share resources together.” There was an emphasis on peer collaboration in my fieldnotes as I coded for how LAL discussed the future use of LAL’s platforms and how teachers are considered in the next phase. Teachers are still using *Tabshoura* “as is” but also expected to share additional materials about how they use the platform to support learning in difficult circumstances.

Finally, in my discussions with LAL staff as we planned for this research study, they told me they were especially interested in using photovoice. They wanted teachers to be more involved in data collection because hearing how these teachers used the platform would help them develop their future steps and help them promote their work with potential funders. The

photos would show them how *Tabshoura* was integrated into classrooms, and the captions and follow up interviews and observations would provide further direct understanding from the teachers. This input from LAL staff about why they needed to hear from teachers helped me to develop the research design for the next research question.

4.4 Data Collection for Research Question Two about Teachers' Engagement

I began data collection for research question two by following the steps of photovoice, and then I supplemented with additional interviews and observations. Photovoice has multiple steps for data collection. Table 2 explains the eight steps commonly associated with photovoice,

Table 2

The Eight Steps of Photovoice

	Photovoice Steps (Latz, 2017)	Description of step	Application of step
Data Collection	Identification	Identify who should join the study	LAL led the recruitment based on teachers who participated in their trainings
	Invitation	Invite participants to join the study	
	Education	Explain the photovoice process	LAL translated and shared my instructions
	Documentation	Participants respond to prompts with photographs	Participants submitted photos via online form
	Narration	Participants share their reasoning for their photo decisions	Participants also submitted captions to their photos
Data Analysis	Ideation	Analysis of the responses	I reviewed the responses with LAL's feedback
	Presentation	Share the responses and analysis	I continued to share reports with LAL
	Confirmation	Participants and other stakeholders share feedback on presentation	

as described by Latz (2017) and includes a column of how the steps were applied with the partnership of LAL staff members.¹ First, the LAL MEAL manager led the identification and invitation of participants based on schools they had developed relationships with through the trainings they hosted for *Tabshoura*. The recruitment for this study relied on LAL staff. Second, the LAL MEAL manager and assistant also supported translations and communication with the participants. Finally, LAL staff were involved with the documentation and narration. LAL staff collaborated on writing and translating the prompts for the photo submissions, for this research was also meant to support their work. They continued to provide translations for the submitted captions and then the interviews. Their involvement with the analysis will be further discussed in the next section.

4.4.1 Recruitment of Participants for Research Question Two

LAL staff led the decisions regarding recruitment, or in photovoice terms, the identification, invitation, and education phases. As an organization, LAL had existing relationships with schools where they have offered trainings for engaging with *Tabshoura* and where they continue to assist teachers with the platform. These existing relationships served as a rich *de facto* sample. In Appendix B, I list the participants LAL recruited for the photovoice study and the schools where they teach. For those who submitted photos and captions, Teachers A-F are from School 1, Teacher G is from School 2, Teachers H-K are from School 3, and Teacher L is from School 4. For those who participated in the interviews, Teachers M-T are also from School 1, and Teachers U and V are from School 5, along with Administrator 1.

¹ These steps are accepted as a general guideline for photovoice, but there is “no universal format” that controls how photovoice is implemented (Sutton-Brown, 2014, p.170).

To begin the research, the LAL MEAL manager sent out requests to schools with information on the study, inviting them to join the photo submissions. Four schools confirmed their interest, and a total of 12 teachers from these schools decided to participate and submitted photos and captions. As part of the photo submission form, the teachers responded to seven demographic questions about themselves and their schools and three questions about their use of *Tabshoura*. Table 3 captures their response about their backgrounds. The teachers are grouped together by color to indicate if they are from the same schools.

First, each of the 12 teachers was teaching outside the traditional public school system in education centers or other informal institutions. These centers were established to address the overcrowding and underfunding in the national system. These schools often had AM and PM shifts in the daily schedule to accommodate more students, and eight teachers, or 67%, indicated their schools have these shifts. All teachers also taught grades EB4 or below, or the equivalent of grade four and below. More than half of the teachers teach multiple grades, and they are evenly split with teaching KG3, similar to kindergarten, and EB2. Overall, these teachers are mostly teaching early education. Furthermore, all but one have taught for more than five years, and they all spent at least a year using *Tabshoura* with five teachers, or 42%, using it for more than a year. This set of teachers had similarities in their schools, grades, years of experience teaching and using *Tabshoura*, so they represented a distinct group of teachers in Lebanon. However, with two teachers, or 17%, having faced some school closings, they also had different circumstances that they had to navigate. Finally, the participants' responses to the open-ended questions about their use of *Tabshoura* did not yield much additional information about them. All 12 participants answered what they used from *Tabshoura* with lists of various names of activities and lessons.

Table 3*Photovoice Submission Form Demographic Questionnaire*

	DESCRIPTION OF SCHOOL	GRADES TAUGHT	SUBJECTS TAUGHT	SCHOOL CLOSINGS IN PAST YEAR	LENGTH OF TEACHING	LENGTH OF TEACHING WITH <i>TABSHOURA</i>
TEACHER A	Center Education Nonformal AM Shift	KG3	Math Earth and Life Sciences English	Not closed	More than 5 years	1 year
TEACHER B	Center Education Nonformal AM Shift	KG3	Math Earth and Life Sciences English Arabic	Not closed	More than 5 years	1 year
TEACHER C	Center Education Nonformal AM Shift	KG3	Arabic	Not closed	More than 5 years	More than 1 year
TEACHER D	Center Education Nonformal AM Shift	KG3	Math Earth and Life Sciences English Arabic	Not closed	More than 5 years	1 year
TEACHER E	Center Education Nonformal AM Shift	KG2 KG3	Arabic	Not closed	More than 5 years	More than 1 year
TEACHER F	Center Education Nonformal AM Shift	KG2 KG3	Math Earth and Life Sciences English	Not closed	More than 5 years	1 year
TEACHER G	Nonformal AM Shift	EB1 EB2	Math English Arabic	10-20 days	More than 5 years	1 year
TEACHER H	Nonformal AM Shift	EB1 EB2	Math English Arabic	Not closed	More than 5 years	1 year
TEACHER I	Center Education	EB2	Math English Arabic	Not closed	More than 5 years	More than 1 year
TEACHER J	Center Education	EB1 EB2	Math English Arabic	Not closed	More than 5 years	More than 1 year
TEACHER K	Center Education Non-Formal	KG1-3 EB1-4	Math English Arabic Science	1-10 days	More than 5 years	1 year
TEACHER L	Center Education	EB1 EB2	Math English Arabic	Did not close	2-5 years	More than 1 year

However, four, or 33%, wrote nothing about how they adapted and eight, or 67%, wrote nothing about how they co-created *Tabshoura*. One school, though, listed the exact same response for these two questions. They each said they adapted *Tabshoura* by dividing lessons and co-created by providing suggestions for improvements. The repetition of these exact responses indicated there may have been collaboration on these responses. Furthermore, since others did not write anything in response to these questions, my word choice in this question may have been ambiguous and a mismatch for the teachers and how they engaged with *Tabshoura*. The questions were translated by LAL staff into Arabic for the participants, so language was not the issue. Therefore, these questions were rephrased and asked in the interviews instead.

Members of the LAL team and other educators in Lebanon with whom they worked also used their existing relationships with schools to select participants and arrange the interviews. Two schools provided the opportunity to interview their teachers, though LAL staff members and I had planned on attending more schools. To maximize my access to teachers, I had scheduled my travel to Beirut, Lebanon, to coincide when schools were in session in September and when the LAL team would begin trainings. However, when I arrived in Beirut, LAL staff and I had to pivot because the public schools were delayed in opening due to the economic crisis. First, we visited School 1, an education center that was still able to operate since it is outside the formal national public school system. School 1 was located in Baalbek, near the border with Syria, so the teachers in this school supported mostly Syrian refugee students grades KG2-Grade 1, or about four to six years old. A Lebanese education nonprofit organization ran this school and partnered with the organization LAL to use *Tabshoura* to offer alternative schedules. Students would rotate learning in school and out of school, allowing School 1 to enroll more students. At this school, I interviewed eight teachers, and at least half had participated in the photo

submissions as well. Second, I conducted additional interviews at School 5 since this school did not participate in photovoice. This opportunity was arranged by other contacts in Lebanon, but this school also partners with the LAL organization. School 5 was also an education center run by a grassroots nonprofit. This organization was formed by Syrian refugees in Lebanon to serve fellow displaced Syrians. School 5 hosted a wide range of students from early childhood education (ECE), or ages 4-6, to basic literacy and numeracy (BLN), or ages eight to 14. The BLN program supported students who had large gaps in their education and were placed in a grade below their age level. This school used *Tabshoura* to create learner-centered education and to provide much-needed support for its students who have been out of school for a significant amount of time due to conflict in the region and forced displacement. At this school, I interviewed two teachers and one administrator who oversees the teachers and their efforts with *Tabshoura*. School 1 and School 5 have similarities as education centers run by nonprofits, but they also had different ages and different needs with their students.

The other data for this research question comes from observations. Similar to the interviews, I observed teachers at School 1 who participated in photovoice, but the additional observations supplemented the photovoice observational data. First, I observed teaching with *Tabshoura* at the schools I conducted interviews. At the first school, a teacher and administrator showed me around the small school, and I observed two classrooms for KG3 students. The second school also gave me a tour of their school, and I visited two classrooms, one for KG3 students and one for older students in the BLN program. Finally, I observed a LAL staff member teach her seventh grade class at a semi-private school for Armenians that were previously displaced in Lebanon.

4.4.2 Collection of Photos and Captions for Research Question Two

Data collection began with photo submission. Teachers were provided a prompt that asks them to respond with a photo and 1-2 sentence caption, or narration, about their own experiences with teaching with *Tabshoura*. The following are the four prompts:

Take two photos of...

1. What you do in the class with *Tabshoura*
2. How you have changed or modified *Tabshoura* to fit your classroom
3. What you like about using *Tabshoura* in your classroom
4. How your students feel about *Tabshoura*

The participants submitted two photos and two captions for each prompt. Duplicating the number of photos and captions for each prompt allowed teachers to share more in relation to the prompt. They shared an image that reflected their initial thinking and an image that captured their further consideration. There was also an optional fifth prompt that is open-ended to offer an opportunity to submit a final photo and caption about anything else they believed was important to convey about *Tabshoura*. The form also included a final open-ended question that asked teachers to summarize in a few words about their experience with *Tabshoura*.² The full set of photovoice instructions and prompts are in Appendix C. Finally, the collection form included a brief 10 question survey that can be found in Appendix D. These questions provided the basic demographic information discussed in the recruitment section and in Table 3. Teachers submitted their responses through an online Qualtrics collection form.

² Since I had to begin photovoice remotely, these additional questions on the photo and caption submission form are supported by other studies that had to adapt to virtual data collection. As Call-Cummings and Hauber-Özer (2021) described, COVID-19 pushed researchers to develop photovoice for a virtual world.

I collaborated with LAL staff to ensure that the form and instructions, or the education phase of photovoice, provided participants the appropriate guidance and support. First, I instructed the teachers to consider their submissions similar to posting on social media. This comparison resonated with the LAL staff when I initially explained it since this is a familiar process for them. Like on social media, teachers could submit something abstract, literal, or anything they wanted to share. Their captions then added context or general information for the viewer, which is similar to a caption on a post on social media. I also wrote the prompts in consultation with the LAL MEAL manager to ensure clarity for the teachers and relevancy for her purposes. She would then translate these prompts and all instructions into Arabic. I beta tested the collection form with LAL staff to ensure that the expectations were clear and the technical aspects were accessible.

4.4.3 Collection of Interviews for Research Question Two

Interviews are a part of the narration phase of photovoice, though I supplemented them with additional interviews with teachers who did not participate in photovoice. With LAL staff and other contacts organizing my visit to schools to interview teachers, I did not have as much control over how the interviews would occur or what time teachers would have to be interviewed. In addition to talking with teachers directly, I was able to see them teaching with *Tabshoura* and to discuss their choices with them. I prepared for these interviews by using a common approach in photovoice for developing interview questions from photos called SHOWeD (Wang, 1999). The questions are shown in Table 4, along with how I adapted them to my study. I adapted SHOWeD to the following set of questions since I did not have all the photos before I conducted interviews and since not all of my interviews would be with those

Table 4*SHOWeD Adapted for this Study*

SHOWeD (Wang, 1999)	SHOWeD Adapted
What do you See here?	What is your experience with <i>Tabshoura</i> ?
What is really H appening here?	What is your favorite/least aspect of <i>Tabshoura</i> ?
How does this relate to O ur lives?	How does <i>Tabshoura</i> connect you with LAL? With parents? With students?
W hy does this situation, concern, or strength exist?	What does <i>Tabshoura</i> help you address?
What can we D o about it?	What changes are needed for <i>Tabshoura</i> to be more helpful?

who had submitted photos. These questions guided my approach to both the semi-structured interviews at the first school and the more informal discussion interviews at the second school. I kept the focus on what SHOWeD represents by starting with an open-ended question about their experience with *Tabshoura* and then followed up with the second question to dig deeper into what *Tabshoura* means to their teaching. I would ask about *Tabshoura*'s effects on their relationships with LAL, parents, and students to understand its role in their community. The fourth question focuses on how *Tabshoura* helps them in their circumstances and what their goals for this platform are in their classrooms and schools. Finally, I would ask what else they would like to see added or changed in *Tabshoura* to better support them and their goals. Keeping this format in mind helped me to adapt to the different interview circumstances and to remain focused on the goals of this study.

I also prepared for interviews by reviewing the photos and captions teachers already had shared. At the time of the interviews, not all the photos and captions had been submitted, but the ones available helped to direct the focus of my questions. The initial impressions helped me understand interview responses and to form better informed follow-up questions.

At the first school, I conducted eight 15-20 minutes interviews with teachers in the principal's office. I interviewed each teacher separately, but one or two LAL staff members were also present in the interviews because they served as translators. The teachers varied in their comfort level with speaking in English with me, so the LAL staff member was there to help the teachers use Arabic if and when they preferred.

The second school was a different, more informal interview process. The school welcomed me by having two teachers present how they used *Tabshoura* in their classrooms. I was invited to ask questions whenever I wanted, which I accepted, but once the questions were answered, they would resume their presentation. This presentation arrangement was not expected, but it was beneficial for developing a rapport with the teachers and for seeing first-hand examples of their work with *Tabshoura* in the presentation. An administrator who was my main contact at the school would also join the discussion when she was in the room and provide further information. Translation was not needed in this interview process, for the teachers were comfortable with using English.

With permission, I recorded the interviews with an app on my phone. I was able to record audio from School 5's presentation arrangement, too. I later used a feature on Canvas to assist with the initial transcriptions. I took a few notes during the visit to the schools for follow-up questions, but I took the majority of my fieldnotes after the interviews.

4.4.4 Observational Data for Research Question Two

The goal of the observations was to see what teachers did with *Tabshoura* and to see what LAL and their partners planned for *Tabshoura*. I wrote field notes and later memos about what I observed in the three schools. I focused my notes on two themes. First, I marked the demographics and circumstances of the classrooms and schools. Second, I would note where *Tabshoura* was in the classroom and how teachers and students engaged with the platform.

4.5 Data Analysis for Research Question Two about Teachers' Engagement

Using the terms from photovoice, the next steps after data collection were ideation, presentation, and confirmation, as shown below in Table 5. Ideation represents the analysis of all

Table 5

Photovoice Analysis Steps

Photovoice Steps (Latz, 2017)	Description of step	Application of step
Ideation	Analysis of the responses	I reviewed the responses with LAL's feedback
Presentation	Share the responses and analysis	I continued to share reports with LAL
Confirmation	Participants and other stakeholders share feedback on presentation	

the data. This process started with the photos and captions as they were mostly submitted prior to the onsite interviews and observations. I discussed the initial photo and caption submissions with LAL staff to confirm what I was seeing, especially in relation to how teachers mainly explicitly focused on students' relationship with *Tabshoura* and not their own with the platform. I then analyzed interviews and observations. These analyses will be detailed next. The final two stages of photovoice are related to presenting and confirming the data with the participants and stakeholders. As discussed, LAL staff were the mediators for the teachers in this study, so they

have remained involved in the analysis. I presented a summary of the findings to the MEAL officer and received confirmation on the relevancy of the analysis. The LAL staff member's interest and focus highlight aspects of the teachers' experiences that were expected and unexpected, like the deeper connection parents formed with the teachers and their students' education. This final report will be shared with the team as well for their use with the teachers who participated in the study. Furthermore, I have shared results and findings with key leaders of the field in seven conference presentations and workshops to better understand and support engagement with OER. The feedback from this process has served as another form of member checking. Their feedback deepened and strengthened my analysis of *Tabshoura* as OER as presented by LAL and as engaged with by teachers. For instance, their comments on the similarities and differences of *Tabshoura* as OER helped with my sensemaking and conceptualizing of the teachers' engagement with OER as a process. Having different expert knowledge involved in reviewing my findings contributed to an iterative analysis.

This section on analysis will start with the photos and captions submitted, and it will include a step-by-step overview of this process as it was applied to my study. The interviews and observations will follow, along with how all the data was triangulated and assessed together.

4.5.1 Photos and Captions Analysis for Research Question Two

Analysis of photovoice has been described as difficult; however, the combination of photos and words (either written or verbal) offers more opportunities for analysis (Wang and Burris, 1997). In this study, the photo submissions can be broken down into photos, captions, and photos plus captions. Each of these elements of photovoice contributed a unique understanding of teachers' experiences. The photos were intended to show how *Tabshoura* is situated in a classroom and how teachers and students interact with the resource. The captions then were

intended to add insight into the teachers' intentions for selecting and submitting their photos. About 42%, or 38 of the 91 photos, had captions written in Arabic, and the rest were in English. Altogether, the photos and captions were intended to offer an understanding of how teachers perceive *Tabshoura* in their classroom. In order to analyze photos, captions, and photos and captions together, I followed the example of how Haney et al. (2004) coded student drawings about educational change. Drawings and photographs are both ways of visually expressing one's experience, so Haney et al. (2004) presented emergent analytical coding to analyze the visual data, along with the written data. In emergent analytical coding, the approach is to list what is featured. I first organized the photos and captions by the prompt for which they were submitted. I reviewed the photos under each prompt, but I set aside the prompt in my initial listing of the prominent features in each photo submitted. Then, I followed the same process when analyzing the captions of these photos separately and listing the main features highlighted in the text. Finally, I reviewed the photos and captions together to adjust and define the list of features and then considered them in response to their prompt, creating themes from the overall photo and caption submissions. I used Google Sheets to organize the coding for the photos, captions, and the photos and captions together.

As an example, I will go through this process with a photo and caption a teacher submitted. The photo and caption I am using here are representative of the 91 submissions because at first glance, all the photos look very similar. Each teacher took a similar approach by sharing a snapshot of classroom activity. They shared a moment in time of their teaching and their students learning. Photo 4.1 from Teacher A is an example of a typical photo, for it



Photo 4.1

Prompt 1: What teachers do with *Tabshoura*

captured a moment of classroom life with *Tabshoura*. The features that I listed for this photo are the following:

- *Tabshoura* is visible
- Projector
- Wall as screen
- Classroom decorations (letters, shapes, emojis)
- Tables/desks
- Teacher at front of students
- Teacher pointing at screen
- Multiple students
- Students looking up front
- 1 tablet on desk in front of 1 student
- No one looking at tablet
- Tablet has the same activity as what is projected on wall

Most of the submitted photos contained similar elements: visible *Tabshoura*, the use of technology, students looking at and engaging with *Tabshoura*, and classroom details like tables, chairs, whiteboards, and learning materials such as decorations on the walls, notebooks, and books.

I then looked at the caption separately from the photo. As mentioned, captions in Arabic required translations from LAL staff before I could review since teachers were encouraged to submit using the language they were comfortable with. The caption for the photo submitted by Teacher A was originally submitted in English and included the following:

The teacher and the learners convened at class. The teacher read and displayed one of the platforms' stories, and the learners listened attentively to the story as the teacher paused each slide to reflect and comment. The teacher alluded and guide the learners to infer the story elements.

The features I listed from this response are the following:

- Teacher reading/lecturing
- Students listening
- Time for comments and responses
- *Tabshoura* was displayed
- Teacher guided students through the lesson

These features from the caption alone show how a teacher utilized *Tabshoura* in their classroom. *Tabshoura* was displayed and used by the teacher with the full class. The teacher chose to read and display the platform for students to listen to, and then they chose to offer time to reflect on the lesson. The captions included actions of teachers and the intentions behind these actions. In this photo, the teacher was a guide as students learned. Through the captions, teachers conveyed their feelings and thoughts about *Tabshoura*, their pedagogical choices for using *Tabshoura*, students' responses and progress with *Tabshoura*, and even details about who supports students' learning at home. By reviewing the photos and captions separately first, I was able to focus on the different elements that teachers chose to share with me. The features of the photos were distinct from the features in the captions, and they created a story once I viewed them together as the last step.

Finally, I reviewed the photo and captions together. To analyze this set of data, I formed categories from the list of features for the photos and captions. Four general categories

developed: technology, students, teachers, and environment. Features from both the photos and captions would fit into these categories to explain what was occurring in a classroom and who was doing what to support learning. Teacher A's photo and caption together show how and why a teacher used *Tabshoura* in their classroom. This teacher guided the use of the platform as a class to share a lesson and to provide opportunities for reflection and feedback. The teacher had a plan for *Tabshoura*, and together, the photos and captions show how the teacher accomplished their goals with the platform. Overall, the combination of photos and captions showed how teachers are using *Tabshoura* to meet the needs of their students.

In relation to the prompt, I developed themes from the features from the photos and captions. For example, the submissions to the prompt "what do you like about using *Tabshoura* in your classroom?" show the features that teachers chose to share to convey their feelings and impressions of *Tabshoura*. There were 21 photos submitted by 11 teachers for this prompt. Coding consisted of listing the features of each photo, and then I grouped the features into categories, as seen in Table 6. The main four categories that I formed from the photos and captions are represented here with a total of 13 subcategories. The "environment" label indicates if the classroom is in or out of the school.³ The teacher category tracked if the teacher was even present in the photo, since the majority did not include the teacher. Then, the student category listed what students were doing, especially in relation to other students. Finally, technology recorded how *Tabshoura* was accessed and used in creating different classroom settings. This

³ The subcategory for "outside" was removed for they were from a teacher who was removed as an outlier. They responded to the prompts with photos and captions of students outside participating in activities hosted by another partner organization of their school instead of with *Tabshoura*.

Table 6*Photo Analysis Categories*

	Categories	Frequency
<i>Environment</i>	Classroom	54
	External to Classroom	7
	Outside	21
<i>Teacher</i>	No teacher	18
	Teacher Supporting	10
<i>Student</i>	Independent	26
	Independent in full class	16
	Groupings	25
	Other activities	25
<i>Technology</i>	Tablet	29
	Phone	2
	Other	2
	None	4

table helps to classify the many different features that appeared in the photos and begins to interpret the choice to include them for this prompt. The frequency of the appearance of the features also contributes to further understanding of the similarity of features shared among the teachers' submission for this prompt. The subcategories begin to show the different capabilities of *Tabshoura* that teachers like, for they have focused on how *Tabshoura* is part of a larger classroom dynamic and how students are engaged in different groupings.

Using these four main categories, I also analyzed the captions in relation to the prompt, developing a similar list of features for all 21 captions. For example, all the items listed in Table 7 are how the participants referenced teachers in the captions for this prompt. The captions

Table 7*Caption Analysis Features*

Teachers
Assigned activity
Set up lesson, objectives, and tasks
Assigned collaboration task
Assigned tasks
Used the platform for listening test
Read and commented on stories
Followed teacher's instructions
Piloted the activity
Explained and guided through activity
Listening to teacher

added further explanation on why teachers liked *Tabshoura*, for this list of features described teachers' actions and intentions for using *Tabshoura*. They liked making choices on how to incorporate *Tabshoura* into their classroom, and they liked how students “followed” and “listened” to their decisions. Overall, teachers used the captions to focus more on pedagogical choices they made behind the ways students were arranged in the photos, on the performance of students, and the guidance they provided students. Teachers used the captions to explain why they liked using *Tabshoura* in the different ways that they showed in the photos.

When I studied the photos and captions together, I merged the photo and captions list of features to develop themes in relation to the prompt. The category I designated as “teacher” was an example of how the photos and captions together provide additional understanding. Teachers were not present in the majority of the photos, yet the captions listed numerous actions from the teachers. Together, the photos and captions explain how teachers used *Tabshoura* to achieve their purposes, even when they were not seen with the students in the photos. They were actively engaged with *Tabshoura* even when not in the photos. I developed themes from how these features from the photos merged with the features in the captions. The themes were then written as statements as responses to the prompt to provide even further insight into the significance of

these features. Below is a list of all the themes written as statements related to the teacher category for the prompt “what do you like about using *Tabshoura* in your classroom?”

- Teachers like that they can set the foundation of the lesson through using *Tabshoura* first.
- Teachers like that students can work independently on *Tabshoura*.
- Teachers like that *Tabshoura* allows students to work in groups and in collaboration.

All the theme statements related to the other prompts can be found in Appendix E.

There were additional features of the photos and captions analysis that provided further insight into the teachers’ submissions. First, teachers submitted two photos and two captions for each prompt, so I also analyzed the differences between the submissions for each teacher. I wrote memos about this transition, for there were often two distinctly different photos and captions, which showed how one teacher used *Tabshoura* in different ways for different reasons. Having two photos from each teacher for every prompt also resulted in additional subcategories of coding, for teachers took advantage of this opportunity to submit different aspects of their experiences with *Tabshoura*. Second, the teachers were given the opportunity to submit an optional photo for anything remaining they would like to share. Seven out of 12 teachers, or 58%, included another photo and caption. I analyzed these optional photos and captions to understand what teachers wanted to share separate from the prompts, but these optional submissions were similar to their previous submissions. Third, I included a final open-ended question to have teachers summarize in a few words what they had submitted. For example, Teacher F submitted:

For me, as I am using *Tabshoura* for the first time it was a great experience that give the chance to try new ways of learning that is different and helpful in many ways either for kids or for the parents.

I analyzed these phrases and short statements like the captions by finding features and organizing them by the four categories of environment, teachers, students, and technology. These questions

included new information about how teachers felt about *Tabshoura* for themselves and for other community members like parents. Teachers started to analyze and summarize their own overall experience with *Tabshoura* in these final statements, which contributed to understanding their motivations for engaging with *Tabshoura* as “open.”

4.5.2 Interview Analysis for Research Question Two

I interviewed four of the 12 teachers who participated in the photo and captions submissions, and then I interviewed an additional six teachers, with four teachers at the same school as teachers who did participate in photovoice. The analysis of the interviews grew from the previous analysis of photos and captions, so I started with the same four main categories—environment, teachers, students, and technology—and then I defined these categories by using open coding. The interviews narrate and expand on the photo submissions, so beginning with the categories that the teachers provided previously help to explain teachers’ stories. In defining these categories, I quickly had to adapt “environment” for “content” because the physical aspects of the classroom were more present in the visual medium of photos. Instead, interviewed teachers were more focused on the content of *Tabshoura* and what they used from the platform. Furthermore, I added “parents” as a category since teachers talked more about other stakeholders in the interviews. So, the main five coding categories were content, teachers, students, parents, and technology. As I iteratively analyzed the data, I also added “LAL positive” and “LAL changes” to mark what teachers said about their relationship with LAL and about changes they would like to see in *Tabshoura*. I used Dedoose, a program for analyzing and visualizing data, to code the interviews and then to analyze the themes. I selected this application for my interviews because of the visualization tools it offered for code co-occurrence, as I will discuss further.

The following quote from an interview with Teacher T shows an example of this process.

*The transition is quite smooth because of two things they're using Tabshoura at home and class. There's not this barrier between the two. They're using the same platform. There's never a new lesson at home. When they come to the center, then they learn a new lesson. Let's say the letter B. And when they go back home the next day, they practice the letter B. So it's a good balance for the children. **Yeah, they know that whether they're at school or whether they're in the center or at home, it's the same platform and it's never a new thing at home. Practicing what they learned the day before.***

Using the established and adapted categories, the categories of content, teacher, and student are represented in this quote. The italicized words indicated teachers, and this quote helped develop a code: “management of the classroom.” Teacher T’s explanation of using the platform in class and home showed how teachers used *Tabshoura* to create stable learning for the students, even when it had to continue away from school. The bold words represent the “student” category, and this quote is part of the “easy to use” code that was developed to show that students can easily engage with *Tabshoura*. Finally, the underlined then is for the “content” category and representative of the “complements” code, for this teacher is highlighting how the mobility of the platform matched and supported their reality of needing to continue learning at home.

Furthermore, as the sample shows, the codes for the teacher and content overlapped. Co-occurrence was common, for I was able to see and study the co-occurrence through the use of Dedoose’s co-occurrence qualitative chart. I would review the codes that had multiple intersections and then memo about the significance of these co-occurrences. Seeing how categories like teachers and content intersected furthered the understanding of the experiences teachers were sharing. I analyzed the interviews of the teachers who participated in photovoice similarly to those who did not because I asked them the same questions based on the photo and caption submissions. While teachers did not mention openness or OER directly, reviewing the codes together built an understanding of how an open platform like *Tabshoura* impacted teachers. A full list of the codes developed from the interviews can be found in Appendix F.

4.5.3 Observations Analysis for Research Question Two

To analyze observations and my overall experience in Lebanon with LAL and teachers using *Tabshoura*, I kept detailed field notes focused on how teachers integrated *Tabshoura* into the classroom and how students would respond. I would then memo about my impressions and connections to my findings from other data. One example of this process is from a field note about my visit to a classroom taught by a LAL staff member.

- *The teachers chose when and what to use from Tabshoura to support students to get them back into chemistry.*
- **Students were familiar with the platform.**
- **Students recognized content.**
- *Teacher used the familiarity of the platform and content to encourage a student who didn't want to share to engage.*

These notes contributed to the understanding of how the teacher used *Tabshoura* and how the students responded, I used a similar analysis of my field notes as I did with the interviews by starting with the general categories I developed from the photos and captions. There was also a co-occurrence here where students' and teachers' engagement with *Tabshoura* are connected.⁴

4.5.4 Triangulation for Research Question Two

As explained and then shown in Appendix E and F, I developed codes and themes from the photos and captions and then from the interviews and observations. To understand the relation among the data, I reviewed them together. Triangulating teachers' experiences from photos, captions, interviews, and observations helped to clarify and solidify what teachers wanted me to know about their engagement with *Tabshoura*. I then redefined and renamed the

⁴ Again, I have italicized the notes pertaining to teachers' actions and bolded the ones for students.

themes to better reflect the teachers' experiences with *Tabshoura*. For example, from the interviews, I have a category labeled as "parents." Then from the photos and captions, I had a theme under the prompt about how students felt about *Tabshoura* that focused on the parents' interest in the platform. I would review the examples that were under these labels, and then along with analysis of other similar themes, I developed a broad key point about the how teachers facilitated community through *Tabshoura*. There are three main areas for how and why teachers engage with *Tabshoura*: make decisions with *Tabshoura*, confidence in *Tabshoura*, and community with *Tabshoura*.

4.6 Positionality

My understanding of the research study is influenced by how and why I am positioned in this research study. For instance, I recognize that my identity as a white, Western woman constrained my ability to understand fully the experiences of *Tabshoura* users in Lebanon. I do not have the same knowledge of their circumstances or their use of OER and what supported or challenged this experience. I may also miss out on learning from their own understanding by being limited by language. Furthermore, my identity as an academic could influence the teachers in this space, for they may feel pressured to provide only positive reviews of the OER.

My external position also was not conducive for the flexibility that was required to accommodate the challenging circumstances, so having LAL's first-hand knowledge of the context, their personal relationships with the teachers, and their own investment in the research supported the adjustments needed for the continuation of the research. For instance, the instability of the region and the crises that Lebanon faced created challenges for me as an external researcher to visit the country. When I began this study, I recognized that my research might have to be conducted virtually if I could not travel to be there in person. Therefore, having

LAL as a partner who lives and understands the circumstances of the participants was beneficial for initiating and conducting research that still carefully and thoughtfully considered the participating teachers—even before I could be physically present.

In my discussions with LAL staff as we built our relationships and I negotiated access, they explained that their role as the “face” of the study, especially the photovoice portion that started remotely, would be a benefit. The teachers in Lebanon were accustomed to being studied, and with an external researcher, they may feel obligated to give only positive reviews to ensure that *Tabshoura* remained funded. Instead, LAL viewed their existing relationship with the teachers as reassurance for the teachers in this study that they can be honest and can trust that the results will be shared with them. The teachers are used to working with LAL and reporting issues and needs, so they can continue this dynamic with this research project. However, while having LAL the organization as the face of the project was purposeful to mitigate the limitations as an external researcher, it also added significant limitations. The close relationship between LAL staff and the teachers can affect how teachers respond, especially since the teachers benefit from this partnership. Moreover, the involvement of LAL staff did not end at representing the project. For example, LAL staff served as translators for the interviews at School 1, so they were intimately involved in this data collection. Teachers at this school could have been influenced to monitor their responses in reaction to the presence of LAL representatives. Also, LAL staff selected and recruited the participants for photovoice and the supplemental interviews and observations, except for School 5. Their leadership in the recruitment for this project does limit this study, for the findings will reflect LAL and their reasonings for the selection of the participants. This study is a case study of a version of *Tabshoura* that relies on the involvement of the LAL organization.

Chapter 5 How LAL Presents Tabshoura

Working closely with LAL staff for two years was especially important for understanding how their intentions for *Tabshoura* relate to OER. In this chapter, I will explain how the LAL team developed *Tabshoura*, how they intended users to engage with the platform, and how they continually developed the platform in response to issues that arose in use. According to the organization's latest annual report, over 60,000 people have been able to access the platform freely (LAL, 2024). *Tabshoura* is freely available anytime anywhere; yet, as stated in Chapter 1, LAL staff do not use the language "open" to describe *Tabshoura*. As the founder of LAL described to me, their understanding of OER revolved around licensing and marking their materials with the appropriate Creative Commons labels. But with ongoing challenging circumstances, LAL staff said they did not want to focus on additional steps at the moment. Although not labeled as "open" by LAL, I selected *Tabshoura* for this dissertation because of the team's purposes for their platform.

LAL presents *Tabshoura* as "open" through how the organization focuses on the platform as being inclusive and participatory for teachers. First, LAL staff includes previous and current teachers, and they designed and created the content for *Tabshoura* with other teachers. Second, LAL staff explained their focus on teachers in the ongoing use of *Tabshoura*, for LAL has offered trainings and workshops to support teachers in using the platform for their purposes. Finally, the organization intended for *Tabshoura* to be "in continuous development" and included teachers and other partnerships in the iterative adaptations and additions (LAL, n.d.-c,

“*Tabshoura*” section). Similar to the cases in the literature review, members of LAL described their platform as a tool for teachers to reach their goals.

My understanding of LAL’s intentions for *Tabshoura* relied upon the relationship I built with the team. From our time together, I was able to learn more about the organization than what is publicly available on their website and in documents like their annual reports. These public materials were important for gaining an overview perspective of their goals and programs, and discussions with LAL staff members provided me with more detail on how the organization operates and how they view *Tabshoura*. When I visited Lebanon, the LAL team welcomed me into their offices, so I spent time with them as they continued their daily operations. I observed their work and meetings and then discussed my notes and questions with them during meal breaks and group social times. In response to my questions, they also shared materials like PowerPoint slides that they used in trainings and demonstrations of *Tabshoura*. I used my field notes from these observations and informal interviews to expand my understanding of LAL and their intentions for *Tabshoura*.

5.1 Development of Tabshoura

How LAL staff developed *Tabshoura* showed their intentions for the platform to be a localized resource that is accessible to all teachers. First, the attention to localization began with the content, which was created and aligned with the Lebanese curriculum “in house, by educators, subject matter experts, technology experts, and audio-visual creatives” (LAL, n.d.-c, “*Tabshoura*” section). The staff members who are involved in the design of *Tabshoura* have been or are currently local teachers. *Tabshoura* was created with those who had experiential knowledge of the circumstances in which *Tabshoura* would be used. It was created “by local for local,” as Nayla Fahed, the CEO of LAL, said.

Second, the LAL team made *Tabshoura* freely accessible. As discussed in Chapter Three, thousands of individuals have accessed *Tabshoura*. The Ministry of Education and Higher Education (MEHE) has also approved *Tabshoura*, and members of LAL have worked with the Center for Educational Research and Development (CRDP), which is an independent department focused on curriculum design, teacher training, and research. CRDP created an official portal, *Mawaridy*, to share lessons with students, and LAL was one of the first to have their content on *Tabshoura*. This portal reaches all the students and teachers in Lebanon, including public, private, and United Nations Relief and Works Agency for Palestine Refugees in the Near East, a UN agency for Palestinian refugees (LAL, 2023a). The availability of *Tabshoura* is also not limited to Lebanon. I was able to create an account and access the materials to experience the platform for myself, even though I am not the target audience. LAL staff said they also had interest from other countries in the region like Jordan in adopting *Tabshoura* for improving their classrooms. *Tabshoura* was available for users around the world with different purposes.

Third, the organization has also promoted alternative ways that they address concerns that inconsistent electricity and the cost of technology could prevent teachers' and students' access to *Tabshoura*. The LAL team built an app for mobile devices that supports downloads for offline access. They also put together *Tabshoura-in-a-Box* in which a hand-held server called "Raspberry Pi" can hotspot and connect with 30 devices with a customizable *Tabshoura* library (LAL, n.d.-c). Additionally, LAL staff have worked with schools and other nonprofit organizations to address specific technological needs. For instance, School 1 has a relationship with the LAL team and with another Lebanese education NGO that has supported vulnerable students in Lebanon for decades by focusing on literacy and independent learning. This NGO and LAL have partnered together to provide this school with alternative solutions like *Tabshoura*

to create opportunities for more students to attend school and for more attention on student-directed learning. The additional NGO provides services and technology to support the use of *Tabshoura* at school and at home. Parents received data plans for their mobile devices to ensure that students would have the resources needed to access *Tabshoura* when they were not in school. The NGO also helped supply the school with the necessary tablets to allow students to practice their lessons on *Tabshoura*. The partnership among the school, LAL, and NGO considered how to provide continual access to *Tabshoura* with the appropriate technology. This type of multi-partner collaboration was a part of working with informal education centers since they are supported by NGOs instead of the national government.

5.2 Intended Use of Tabshoura

By developing a localized and accessible platform, LAL staff intended *Tabshoura* to be a tool for teachers. In my first initial conversations with staff from LAL, they would describe *Tabshoura* as a support for teachers to “bridge the gaps” in students’ education due to their unstable circumstances. Members of LAL explained that *Tabshoura* was intended to be a tool for teachers to use to navigate the diverse needs of their students, and the platform was never intended as a replacement for the teacher. The teachers decided how *Tabshoura* would fit into their classroom for their students, which the next chapter will explore.

Tabshoura was designed with features to support teachers’ use of the platform. The staff named the platform *Tabshoura*, meaning “chalkboard” in Arabic, because they wanted to go back to basics to ensure students have access to relevant and engaging education and to support teachers to meet students where they are. *Tabshoura* is a platform of educational materials, but it is more than a repository housing content. As stated on the organization’s website:

Tabshoura follows a discovery learning methodology encouraging learners to build on past experiences and knowledge, use their intuition, imagination and creativity, and

search for new information to discover facts, correlations, and new truths. Learning for us does not equal absorbing what was said or read, but actively seeking for answers and solutions. (LAL, n.d.-c, “*Tabshoura*” section)

LAL staff embraced this discovery learning methodology through an interactive learning experience that includes images, stories, and activities designed like games. LAL used Moodle, an open-source software for building one’s own learning management system (LMS), to design *Tabshoura*. Below is an example of what a student may see when working on *Tabshoura*.

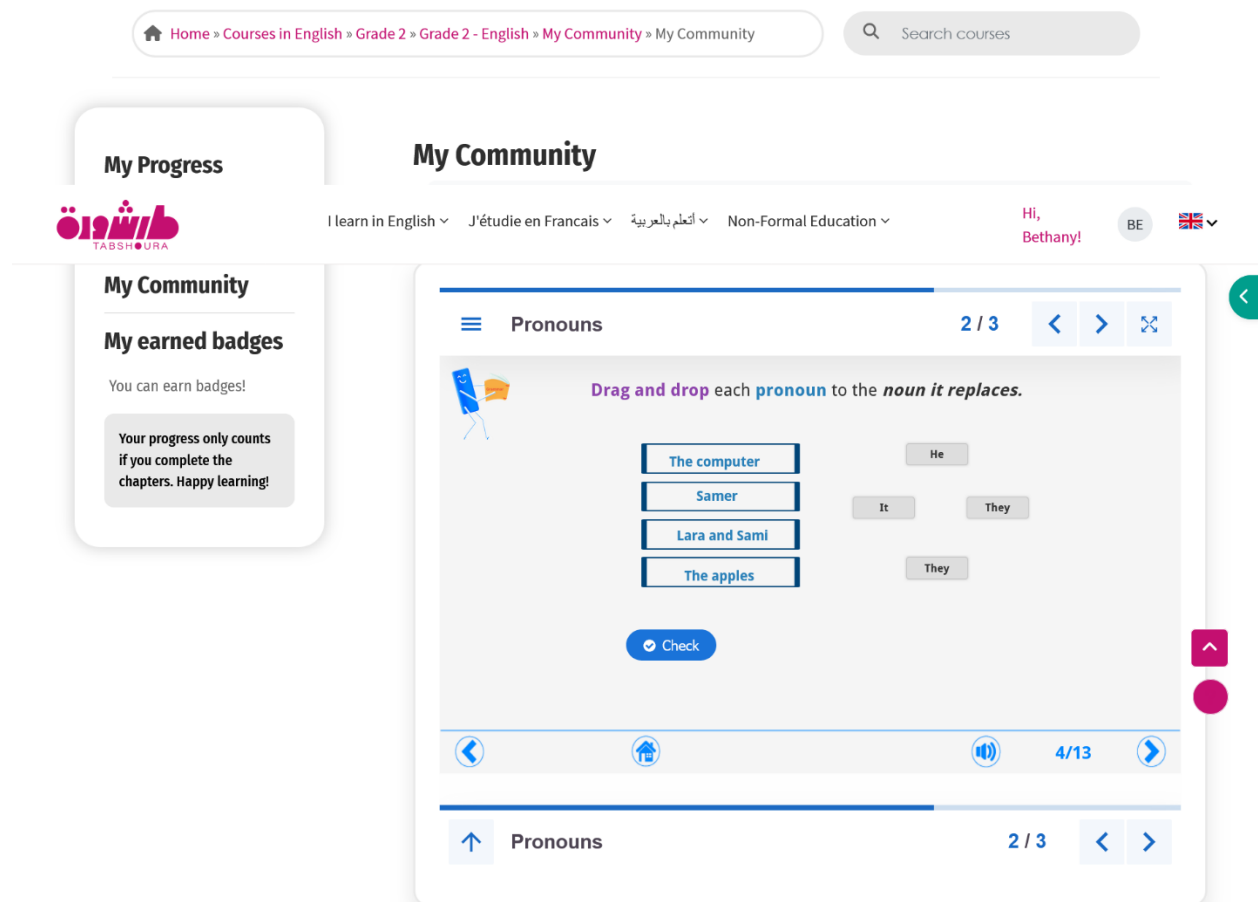


Photo 5.1: Screenshot of *Tabshoura*

This image of the platform shows how the user interface is interactive, user-friendly, and includes different features to support students. For instance, *Tabshoura* has a feature that allows students to redo activities as often as they want. They can self-direct their learning to address

their learning losses, and they can continue to practice a lesson or skill without repercussion of completing it incorrectly. LAL staff explained that they designed *Tabshoura* not as an assessment of a student but as a resource for teachers to help them feel comfortable and confident with learning, despite the reasons that may have disrupted their education. Therefore, the lessons have a clear design for teachers to follow and use. For the KG and elementary lessons, the curriculum is centered around storytelling. Middle school math and science lessons have the same five categories: “I start,” “I discover,” “I summarize,” “I practice,” and “I relate.” Teachers can use this consistent design for guiding their lessons and for engaging students. Furthermore, teachers who have their students register as part of their class on the platform, a task supported by LAL staff, can view how their students spend time on *Tabshoura*⁵. For instance, a teacher can see the first response a student submits for an activity, even if they do answer incorrectly and repeat it. *Tabshoura* is meant to assist teachers in feeling ready and confident in meeting their students’ needs, especially as they now face instability in the school and in the country.

When I visited Lebanon, I was able to observe the staff’s intentions for *Tabshoura* in practice. Public schools were delayed in opening due to the financial crisis, so I was invited to observe one of LAL’s staff, who is also a teacher in a semi-private school for the Armenian population of Beirut, use the platform to teach her seventh grade science class on the first day of the school year. She used a laptop and a projector to review lessons from their sixth-grade year to connect to their previous knowledge. I assume that the LAL team selected this observation opportunity for me because this use of the platform represented their intentions for *Tabshoura*.

⁵ The latest version of *Tabshoura* in early 2025 now allowed the school administration to monitor student progress instead of the teachers themselves.

They wanted the teacher to be able to address their pedagogical needs through selecting the appropriate lessons for their purposes. In this case, the teacher used *Tabshoura* as part of a student-centered learning approach. She used *Tabshoura* as she needed for her classroom.

While *Tabshoura* is available for anyone to access whenever they want, the organization also promotes further engagement with the platform through online and in-person training workshops it offers, though these are mostly by request. First, there are specialized trainings for teachers involved in projects with funders who have specific goals and outcomes. For instance, the Head of Capacity Building shared with me the materials for professional development focused on teacher capacity building for e-learning in emergencies in a project funded by GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit). As an organization, LAL also offers other pedagogical training for teachers to use *Tabshoura* for their purposes. In their partnership with Right to Play, LAL staff focus on incorporating the joy of learning through *Tabshoura* for middle school students (LAL, 2024). The organization offers support for teachers to develop the pedagogical skills to use *Tabshoura* as needed in their classrooms, and they also provide technical training and support. Teachers at School 1 received initial training from the organization for accessing *Tabshoura* and for registering their students on the platform, and the school maintains a relationship with LAL staff through regular contact. Second, the organization has arranged in-person workshops to introduce *Tabshoura* to schools that have reached out due to the interest of their teachers. I attended one of these workshops at a school where a LAL staff member also teaches. In her presentation to her fellow teachers, she discussed how *Tabshoura* can be used to facilitate learner-centered pedagogy. Third, the LAL team have considered how to support individual teachers who want to engage with *Tabshoura* independent of their schools. In late 2023, they hosted their first open webinar to support these teachers, providing time to demo

Tabshoura, explain its capacities, and answer teachers' questions. LAL's trainings for *Tabshoura* generally have centered on preparing teachers for accessing and incorporating the digital platform in their classroom's pedagogy, especially as they navigate remote learning and student's evolving needs in emergencies. The organization's promotion and support for teachers engaging with *Tabshoura* has focused on ensuring that they have access and can use the platform for their purposes.

The LAL team also recognized how *Tabshoura* could support teachers in responding to the uncertainties in their context. I commonly heard LAL staff and their partners say phrases like "in Lebanon, you never know" and "we always hope," so they worked with other organizations to provide training and additional guidance to teachers using *Tabshoura* in response to crises. For example, I attended a meeting with LAL staff and Teach for Lebanon (TfL) as part of their collaboration to build educators' capacity by scaling a blended model of learning in Lebanon (LAL, 2024).⁶ During this meeting about designing the training for teachers, staff members explained that *Tabshoura* helps teachers be an instructor, facilitator, and designer. Teachers can continue to instruct their students, but they also now can use *Tabshoura* to facilitate blended learning and design new pedagogical approaches for students. LAL staff explained they saw an increase in use of *Tabshoura* during the COVID-19 pandemic since blended learning was necessary at this time for teachers and students to stay connected even when not physically together, and now this need for connection continues with the inconsistent access to schools.

⁶ This project is in partnership with Agence Française de Développement (AFD) Group and implemented with Expertise France as part of the Shabake 2 program, which supports Lebanese nonprofits. Together, they designed the blended Learning Model from context-based research. The pilot consisted of training 20 TfL Fellows, who then trained 100 teachers across 10 schools in Lebanon, impacting 2,000 learners.

5.3 Continuous Development

As written on the website for LAL, *Tabshoura* is in continuous development. When teachers use the platform for their purposes, additional needs may arise to which LAL staff can respond. Anyone can access *Tabshoura* without a relationship with the team, and the majority of users of *Tabshoura* engage with it “as is,” meaning they do not adapt or change the content directly on the platform. Alternatively, LAL’s partnerships with teachers, schools, and other nonprofit organizations mean that LAL staff can offer adaptations and additional content to customize the platform for the users. LAL staff mostly offer their technical skills to adapt and edit the platform instead of training others to change *Tabshoura*.

As an organization, LAL did not make *Tabshoura* accessible for unrestricted adaptations, and they have not widely offered workshops or trainings on adapting or creating content on *Tabshoura*. Instead, LAL staff have worked directly with partner schools or other nonprofit organizations to edit the platform’s content or interface when requested. For instance, when teachers at School 1 had a concern about the log in process, staff members made technical changes to streamline the process. LAL staff explained that they added the feature to allow users to use existing Facebook and Gmail accounts to login. Technical problems are ongoing, though. LAL staff recognized that the sign-in used the Latin alphabet and not the Arabic alphabet, which can be difficult for some users. For editing and adding content, the organization also maintains control and oversees the process of content changes. LAL staff explained that when a teacher or school they are working with requests an additional unit of science or a new course on health, they work with the requester directly to meet those needs.

LAL staff supported schools and teachers to participate in the changes and additions they needed—but only once they had had an initial training. School 5 is an example of the LAL team including the users in the continual development of *Tabshoura*. This school is an informal

education center run by a grassroots nonprofit formed by Syrian refugees in Lebanon to serve fellow displaced Syrians. This school hosted a wide range of students from early childhood education (ECE), or ages 4-6, to basic literacy and numeracy (BLN), or ages eight to 14. To support the varied needs of this wide range of ages, School 5 needed to adapt *Tabshoura*. I had a discussion with teachers at this school, and they explained that they did not have access to editing the platform until they received training from LAL staff for basic coding skills to edit the content of the platform. Making changes to the original *Tabshoura* required permission from LAL staff, but once the teachers at this school had permission and the proper training, they could edit their additions whenever they needed, as I observed in a demonstration at the school. The teachers adjusted the activities and lessons because they needed to be appropriate for BLN learners who were grade levels below their age, often due to years of missed schooling as a refugee. Teachers would add pictures or videos from Google and YouTube to help these learners with difficult concepts, they would re-record the audio on *Tabshoura* so that students heard Arabic with familiar accents, and they would add more activities to engage these students. They used *Tabshoura* to edit over 50 courses to support their students' varied needs and diverse educational backgrounds. They also added a section of content that was focused on life skills to help their students with topics like hygiene and safety. Making changes to *Tabshoura* required training and support from LAL staff, and the changes to content only remained on the version of *Tabshoura* the school accessed.

The LAL organization also collaborated with other organizations in funded OER projects to develop additional content to address the needs of teachers and students. For example, LAL works with TheirWorld, SKILD, and Ana Aqra at the early childhood education level to add units to improve young children's learning with the acquisition of psychomotor and oral skills

(LAL, 2024).⁷ LAL worked in partnership with other organizations to create specialized content and lessons to address specific purposes for the platform.

While creating content is not currently how most users engage with *Tabshoura*, the LAL organization has an additional program to expand the opportunity for teachers to collaborate and co-create lessons and curriculum to address needs that arise in changing circumstances. These shared lessons can be with and without *Tabshoura*. LAL's next program is *LALmoudaress*, meaning in Arabic "for teachers," a platform by educators for educators. This platform started in 2020 during the COVID-19 pandemic with another nonprofit organization, Inspiration Gardens, to connect teachers and to build a resource platform with lesson plans and methodologies for teaching remotely. The need for a platform that supports teachers navigating challenges has only grown since its original conception, so LAL is leading this initiative to have a platform that houses lesson plans, tutorial videos, and pedagogical strategies created by teachers for other teachers to learn from and use. Lesson plans can include resources other than *Tabshoura*, and there will be emphasis on providing teachers with comprehensive support through professional development resources as well. There even will be a discussion forum to allow teachers to talk and discuss their questions and offer solutions. In an interview with the *LALmoudaress* content manager, she said that "the ultimate goal of *LALmoudaress* is to create this network of educators where the norm is sharing knowledge, sharing expertise, sharing skills, sharing resources." LAL staff wanted to create a community for teachers that is wider than just LAL and *Tabshoura* by supporting teachers to freely create and reshare their own materials. *LALmoudaress* is currently being piloted for testing and improving the user experience.

⁷ This project, called My Best Start, is supported by TheirWorld, a global organization working towards education equality, in collaboration with Ana Aqra, a local Lebanese education nonprofit, and SKILD, a local Lebanese nonprofit for students with additional needs. With the support from TheirWorld, Ana Aqra designed more units, SKILD added learning skills to units, and LAL adapted and digitized them.

5.4 Tabshoura and Arinto et al.'s (2017) Degrees of Social Inclusion

As an organization, LAL created a platform that was freely accessible and available to all who needed Lebanese-aligned curriculum. LAL offered trainings and workshops for teachers to learn the technical skills for accessing *Tabshoura* and the pedagogical skills for using the platform to support their goals, especially in circumstances that prevented consistent school attendance. This support did not extend to training teachers how to adapt or add content to *Tabshoura*, unless there was a partnership between the LAL organization and a school and its teachers. When using terms from Arinto et al. (2017), LAL's main focus was access to curriculum, so the organization's presentation of *Tabshoura* fits more into the category of use. Adapting content and creating new content for *Tabshoura* did occur, but this type of engagement was not as common and did not occur without a relationship with LAL staff. Using Arinto et al.'s (2017) framework, LAL the organization developed a platform that was open at the lower degree of social inclusion for most participants with opportunities for the two higher degrees of social inclusion for their partners. What the degrees of social inclusion meant to teachers and their engagement with *Tabshoura* is addressed in the next chapter.

Chapter 6 How Teachers Engage with Tabshoura

The previous chapter discussed how LAL presented *Tabshoura* as “open” through its inclusion of teachers in the development and use of the platform. This chapter will focus on how and why teachers participated in integrating the platform into their practices. In this chapter, I discuss how teachers engaged with *Tabshoura* as “open” through how their decisions directed and shaped the platform as support for their teaching and students’ learning. LAL had its goals for *Tabshoura*, but the teachers also determined the use of the platform through the decisions they made about how the platform would best serve their students. In this chapter, I will use evidence from the photos and captions, including the summary question included on the photo submission form. Furthermore, I will draw from my interviews and observations of teachers at two schools, which are both informal education centers serving mostly Syrian refugee students. School 1 and 5 both host early education students, but School 5 also includes students in the Basic Literacy and Numeracy (BLN) program for students who are enrolled in grades lower than their age levels due to inconsistent or nonexistent educational background. Further evidence will also come from my additional observations of a teacher, who is also LAL staff, at a semi-private school for Armenian students. In this chapter, I will discuss how teachers in this study made decisions about how they integrated *Tabshoura* into the classroom and the pedagogy and how they adapted the content to serve their students. I will also discuss what I saw as their confidence in the platform and the relationships they strengthened through how these teachers used *Tabshoura*.

6.1 Teachers Make Decisions with Tabshoura

Even though *Tabshoura* offers complete lessons, the 22 teachers in this study described the decisions they made throughout their engagement with *Tabshoura* to best support their students. While teachers appeared in only 21 of the 91 photos, roughly a quarter of the total photos, they were positioned as leaders at the front of the room or as supporters next to students working. Captions also referenced teacher's activity as "guiding" and "assigning" tasks. They showed themselves leading students and making decisions in each photo. The first decision that seventeen teachers discussed was how they chose to use the platform to facilitate alternative learning spaces to accommodate more students and to offer consistency for wherever and whenever students are learning. Second, all the teachers in this study discussed how they chose to use *Tabshoura* to help facilitate the appropriate pedagogical approach for their learners. Eight teachers said they chose what parts of *Tabshoura* to use by reordering lessons and simplifying activities, and 17 teachers told me they also chose how to use *Tabshoura* by supporting independent learning, group learning, and even the use of other activities and materials. Finally, teachers at School 5 also demonstrated how they edited and added their own content to *Tabshoura* to support the specific needs of their students. The stories and experiences that all 22 teachers shared with me in this section show how they are making decisions about how to utilize *Tabshoura* in their classrooms for their students.

6.1.1 Alternative Learning Spaces through Tabshoura

First, 17 out of 22 teachers in this study discussed how they chose to use *Tabshoura* to facilitate alternative learning spaces outside of the school building. They used the platform to provide their students with access to the same lessons even when away from school to continue their learning. This use of *Tabshoura* evolved from initially using it during COVID-19 lockdowns that prevented any in-person schooling to now using *Tabshoura* to facilitate more

consistent access to education. Overcrowding of public schools due to the unaffordability of the once-preferred private schools combined with an influx of refugees from neighboring countries has contributed over a million students out of school (Save the Children, 2023). There have been different attempts to consider the changing population of students. Schools have implemented shifts to accommodate Lebanese students in the morning and the Syrian refugees in the afternoon, but this physical division has resulted in social divisions and lower quality education (Hajir et al., 2024). The schools that are participating in this study are education centers that are informal public schools comprised mostly of refugees that were established with governmental approval to tackle this issue of overcrowding and lack of access to quality education. The majority of the teachers in this study said they used *Tabshoura* in response to these difficult circumstances.

The COVID-19 pandemic popularized *Tabshoura* in the classroom, according to LAL staff, and I heard multiple statements from teachers about why they have continued to need *Tabshoura* to connect the home to the classroom. In a discussion with a member from LAL, Teacher S explained how *Tabshoura* has continued to support learning at home:

LAL staff member: During Covid 19 or any kind of crisis that would require for the students to stay home, it's really good to have *Tabshoura*. To be able to learn at home, it's a great asset.

Teacher S: With the economic crisis and price of fuel, it helps the student to teach at the home.

This teacher described *Tabshoura* as a method for continuing learning regardless of where the student is located, which is vital when attending school is often in question due to economic crisis and intense conflict in region. Furthermore, at School 5, which hosts students who are placed in Basic Literacy and Numeracy (BLN) classes, two teachers explained to me that

students are often juggling work commitments that can prevent them from attending class during the day. Teacher U explains how she used *Tabshoura* to accommodate the students' schedules:

[T]hey [students] can use the platform at night, and they can solve the questions on all the things. If they have any questions, they used to text on WhatsApp the next day about the lessons...[T]hey have the opportunity in the next day to ask us..., even if they are at the work. Like they'll ask the question, and we will answer them and then when they come back, they can read it.

Teachers at School 5 said how they were using *Tabshoura* as a source of reliability and consistency for the students. They said their students could continue to complete the lessons at home while they can follow along with their progress to assist them while they are away from school and when they can return. These teachers reported using other tools like WhatsApp to instruct students and to maintain contact and relationships with them.

Teachers at School 1 also shared a similar approach in using *Tabshoura* to provide alternative access to education. When I visited this school, the teachers and staff explained how the teachers used *Tabshoura* to create shifts where students would split their time at school and at home, rotating their schedules to allow more students to enroll and attend this school. These teachers would then use *Tabshoura* as the consistent tool that kept them connected to their students at home. I observed how teachers at this school designed the classroom and curriculum around *Tabshoura* to prepare students for their independent learning away from school. The school had a technology room where the teacher would introduce the lesson with *Tabshoura* as an assistant. Then, in the activity room, students would use resources like arts and crafts to practice what they just learned. These resources included tablets so that students could become familiar and comfortable with *Tabshoura* and with the tasks they would complete at home. Students would also come to this room before school began if they needed help with the lessons assigned for their days at home. This rotation system required teachers at School 1 to work

together and with their administrators to ensure that students received the same support and attention whether they were in school or at home.

In Photo 6.1 below, Teacher C shows a student sitting on a couch accessing *Tabshoura* on a mobile device. The caption explains that he is working on the “assigned” lesson in preparation for attending school. In the caption, Teacher C describes how his teacher is intentional with the practice of using *Tabshoura* at home. This teacher directs the use of the platform even away from school while also still supporting the development of soft skills like “accountability.” Teacher M from the same school said that she can send links to the exact page of the lesson on *Tabshoura* she wants the students to complete. She also sends the objectives of the lesson to help her students connect what they are learning at home to what they do in class.



Photo 6.1

Prompt 2: How teachers changed *Tabshoura*

“The learner... 5 years old showed accountability to perform the assigned tasks before attending the school the next day.”⁸

⁸ Under each photo that teachers submitted, I have numbered the photo and included the prompt for which teachers submitted it and the corresponding caption, distinguished by quotation marks. The captions are italicized to indicate that they were originally submitted in Arabic and have been translated by a LAL staff member.

The ten teachers from School 1 I interviewed each discussed how they would use the in-person time to introduce lessons, and then they assigned practice and review work for students to complete on their “off” days. They used *Tabshoura* to continue classroom learning. Specifically, Teacher Q and Teacher T explained how *Tabshoura* helps the continuation of education:⁹

Teacher Q: It's a great thing to have Tabshoura at home because they do classes one day in class, one day at home. So it's great for the student to know what to expect from the lesson, the objectives of the lesson.

Teacher T: The transition is quite smooth because of two things they're using Tabshoura at home and class. There's not this barrier between the two. They're using the same platform. There's never a new lesson at home. When they come to the center, then they learn a new lesson. Let's say the letter B. And when they go back home the next day, they practice the letter B. So it's a good balance for the children. Yeah, they know that whether they're at school or whether they're in the center or at home, it's the same platform and it's never a new thing at home. Practicing what they learned the day before.

These teachers described how seeing the same content at school and on devices at home helps their students maintain their motivation and momentum. Teacher T and Q said their students know what they are supposed to do and can follow the lessons even when working independently away from school. Using *Tabshoura* as a continuation of the classroom offers some needed stability for both these teachers and their students who are dealing with changing circumstances. Most teachers across the schools in this study have said they used *Tabshoura* to offer clear expectations, a guided path forward in their learning, and direct support when needed. Their students are in and out of school for many reasons, so they detailed how they use this platform to offer not only continued access but also personalized support.

⁹Similar to the photo captions, quotes from interviews with teachers who spoke in Arabic will be italicized throughout the dissertation to indicate translation.

6.1.2 Curriculum Decisions

Second, all 22 teachers explained their decisions about how to use *Tabshoura* also centered on developing flexible lessons and diversifying pedagogical approaches. Ten teachers discussed reordering the lessons, simplifying the activities, and adapting the content to be relevant and appropriate, especially to the age of the students. All the teachers in this study also talked about their students' enjoyment of *Tabshoura*, so 17 of the teachers discussed how they maintained their students' motivation and engagement through independent learning, collaborative learning, and even the use of other activities and materials.

First, 10 teachers out of 22 explained how they would adjust the lessons in *Tabshoura* to address the needs of their particular students by reordering the materials, by simplifying lessons, and by adapting the content to be relevant and appropriate. The teachers in this project came from schools with different demographics. Some have young students who are in their first years of school and then other teachers must navigate older students who have gaps in their schooling and require beginner course materials. Therefore, the teachers in the examples in this section talked about making decisions about how to engage with *Tabshoura* to help their particular students. In Photo 6.2, Teacher J shows a teacher helping her students in the moment with their confusion or misunderstanding. In this example, she talked about being able to adjust her teaching and her use of *Tabshoura* in the moment to help her students and to continue the lesson. *Tabshoura* did not fulfill the teachers' curriculum needs. While this photo and caption do not provide details on what caused the misalignment, the other nine teachers explained how they also adjusted the lessons for their purposes. Seven teachers told me in the interviews how they would reorder lessons to better suit their students. For instance, when teaching letters in Arabic, Teacher M said she “*doesn't necessarily follow the order, but [I do] end up going through all the*



Photo 6.2

Prompt 2: How teachers changed *Tabshoura*

“This image illustrates the teacher's explanation of some questions that were not understood by the child due to their lack of alignment with their curriculum.”

letters, just not necessarily on the order that's displayed on *Tabshoura*.”¹⁰ Similarly, Teacher R said she decided to teach “S” and “8” on the same day because of the similarities when writing them. These two teachers explained how they make decisions to better connect students with the curriculum through restructuring and reordering the lessons on *Tabshoura*.

Seven teachers explained that the changes they made were to simplify lessons. Teacher L said she would “assess the students’ skills level” and would adjust the lessons accordingly. In Photo 6.3, Teacher I shows a teacher who used additional materials to simplify the lesson. She uses a whiteboard to break down the types of adjectives, and in the caption, she explains that she decided to use the whiteboard to introduce a lesson before using *Tabshoura*. It is an additional tool for her to use for her objectives. Teacher Q said she considers her students’ ages and might shorten lessons so that her students “*can process it.*” She explained that they can be overloaded

¹⁰ The translator used third person to refer to the teacher whose words are being translated, so I am rewording the pronouns for ease of reading, as I do for other similar translations.

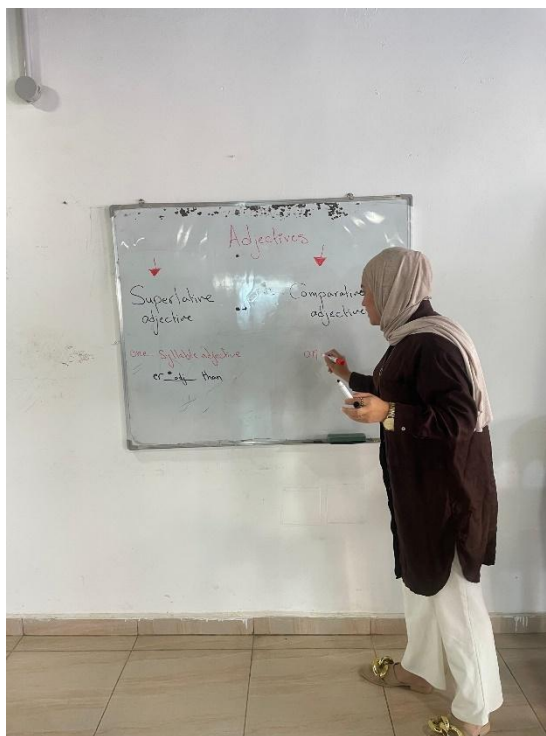


Photo 6.3

Prompt 2: How teachers changed *Tabshoura*

“The lesson is My friends are Back We simplify the lesson on the board before using (Specially grammar part).”

by learning too many words in one day, so she breaks down lessons to support their capacity to retain the information. The teachers that teach BLN students at School 5 also said they may simplify lessons in response to their students’ backgrounds and needs. Administrator 1 said they have “slow learners,” for instance, because “we have students that suffer from trauma, have never been at school before. So we at school decide to adapt the objectives in a way that suits our students' needs.” She said her teachers use the same curriculum that *Tabshoura* provides, but they may simplify the lesson and provide students with extra worksheets or personalized lessons to support their progress.

All 22 teachers in this study also discussed or showed how they used *Tabshoura* to facilitate appropriate pedagogical approaches for their students. I witnessed teachers deciding

how to use *Tabshoura* to change their pedagogy in my visit to a semi-private school that was established for the Armenian population. In this school, a few teachers had started using *Tabshoura* based on the recommendation of one teacher who also worked with LAL. I visited when this teacher was presenting *Tabshoura* as part of a professional development series about learner-centered and blended learning pedagogy. The teachers in the workshop expressed resistance to the idea of changing their approach to education, but as these terms were defined, they spoke favorably about how these approaches were supportive of their goals to close gaps in students' education and how *Tabshoura* could facilitate these relevant pedagogies. Fourteen teachers in interviews and photo submissions also reported how *Tabshoura* assisted in their choosing pedagogies that helped engage their students and assist in the students' overall progress.

Ten teachers out of 22 used their photo and caption submissions to explain how they developed an independent learning pedagogical approach through *Tabshoura*. In almost half of the 91 photos these teachers shared, they showed students at home on a mobile phone or in the classroom on their own tablet. Some photos included other students in the photos, but each student was working on their own tablet on their own lessons. The captions of these photos of students working independently also captured the intentions of these teachers for using *Tabshoura* for independent learning. For instance, Teacher J highlighted how students were learning skills such as “*self-reliance*” and accountability. This teacher explained how they used *Tabshoura* to support students' growth and independence. Teacher A shared the Photo 6.4 of a student working on his own in the classroom. The teacher uses the caption to expand this image to show that the student is using *Tabshoura* to redo an activity until he is successful. Another student is also visible in the bottom left corner, peeking at his neighbor's tablet, for this student



Photo 6.4

Prompt 2: How teachers changed *Tabshoura*

“Ali is shown in the picture when he was redoing an activity until he excelled in solving it. Ali garnered interest in collecting digital badges and marks.”¹¹

is working independently in a classroom with other students. Teacher A used their photo and caption submission to explain how the student was able to direct their own learning and repeat lessons and activities as many times as they needed.

Nine teachers in this study used “fun” to describe *Tabshoura* for their students. They explained how the platform’s features entertained and motivated students, which is vital when teachers are not always able to be with the students. The platform uses characters and cartoons, colors, and media like videos to engage students. Teacher J explained with her photo and caption how the components of *Tabshoura* did not just entertain students but also facilitated participation. In Photo 6.5, four students share a table but work individually on their own tablets. They each appear focused on the screen in front of them, and *Tabshoura* and its characters are visible on the screen. The photo shows students working independently, and the caption confirms that the students are engaged by the platform and are working through the lessons. *Tabshoura* is

¹¹ Names used for teachers and students are pseudonyms.



Photo 6.5

Prompt 1: What teachers do with *Tabshoura*

“This image describes the extent of children's engagement and attraction when solving questions on their own through the Tabshoura platform.”

attractive to these students. Teacher R who has children who attend a more formal school complained that the platform her children's school used was only text: *“I can guess that they probably scanned most, probably scanned books or simply typed it in. There's no effort on the visual aspect, no colors, no videos, no sounds much less interactive and fruitful than Tabshoura.”* She said she much preferred *Tabshoura* and its design because students are encouraged to interact with it. As Teacher Q said, students are not only *“watching a video and that's it. It requires the student to participate. So it's a great thing.”* The aesthetics of *Tabshoura* are attractive to her students, but the platform is more than its design. *Tabshoura* also invites interaction. In the observation at School 5, teachers listed all the options of activities that they could utilize and rotate through to prevent boredom for the students. Administrator 1 even refers to *Tabshoura* as supporting active learning with its use of activities that engage students. From interactive design like dragging and dropping answers to the correct spot to watching videos followed by quizzes, Teacher U explained that *Tabshoura* was like a game to their students: *“It's more having fun, not only education.”*

Teacher P also explained in her interview how *Tabshoura* encourages students to continue the lessons even when they are working independently: *“It's also very encouraging because a student actually sees when they answer correctly. There's a star that pops up. The student is encouraged and happy to continue working.”* As seven teachers mentioned to me, students receive stars on the platform when they submit correct responses as an incentive to progress through the lessons. Furthermore, the platform design allows students to practice and repeat lessons as many times as they need without penalty. In her interview, Teacher S discussed the importance of this continuous self-assessment:

The self-assessment that you can have on Tabshoura because if you're wrong, it's not you're wrong and that's it. They explain why you are wrong. They let you try several times and at the end if it's right, you have to check with the star so it's autonomous and allows self-assessment for the students.

As she explained, students could still collect stars despite submitting incorrect responses previously, though all tries and responses are saved for teachers to review as part of their planning future lessons. Even with students working independently, Teacher U said she could monitor progress students are making or not making and could then “follow up the students, to see the weakness of the students and to work on it.” Teacher R expressed appreciation for this independent approach to learning:

Working on Tabshoura revealed that it's a good thing for the student to be able to go to school and learn at school, but somehow, he can also learn by himself. It's the how that's important. It's the way he learns that's important.

She explained that the decision for independent learning with *Tabshoura* better supported how her students learned.

Teachers did not rely solely on an independent learning approach, for fourteen teachers also used *Tabshoura* to facilitate partner and group learning. As Teacher S stated:

The activity or the assessment is made to be completed by one person, but it doesn't mean there's no participation inside the class. It's just that it's mostly every student with their tablet, completing the assessment or activity.

This participation can be seen in several photos. Ten teachers submitted photos and captions to show how students collaborated and worked together on *Tabshoura* activities. Working together looked differently across the photos. Some photos showed students sharing a tablet to complete a lesson, and the captions highlighted the teachers' intentionality behind this approach. For instance, Teacher C said that a pair of students “showed accountability and diligence” when they completed a task together. The same teacher continued this attention to the benefits of collaboration in Photo 6.6 of a table of five students and a teacher (one adult hand is visible in the bottom left-hand corner). The photo shows students sharing a workspace and a tablet to



Photo 6.6

Prompt 4: What students feel about *Tabshoura*

“The group of learners worked together on the same task. The activity helped them build a positive and engaging learning community through peer learning and teaching. Working on the platform had Promoted peer interactions which positively affected learning experiences by preparing the learners for work beyond the classroom.”

complete the task on *Tabshoura*, and a teacher is still present for guidance. Several students are leaning to view the tablet, and another student is looking at the teacher who is out of view. They are visibly interacting with the task and with one another. Teacher C used the caption to explain

that this learning environment was intentionally designed to foster collaboration among the learners, to build a community for the students now, and to instill lessons for the future. Teacher C said she did not use *Tabshoura* just for conveying academic content, but she also used it to facilitate peer learning and community. Teacher B also explained how she used *Tabshoura* in group settings to create friendly competition among students in Photo 6.7. This photo shows two students working on the same tablet at the same table. One student is wearing a hand-crafted



Photo 6.7

Prompt 3: What teachers like about *Tabshoura*

“The platform’s distinctive role in terms of inciting competitiveness, arousing happiness, joy and eagerness to score the full mark has built a strong motivation among the learner to solve the learning activities optimally.”

crown, so there is evidence of previous engagement in the classroom as well. The teacher used the caption to further explain this working dynamic as competitive but also joyous, happy, and eager. Teacher B described that this competition helps engage and motivate students and serves as another way to connect students with their schoolwork, especially in the midst of challenging circumstances. The teachers in these examples used *Tabshoura* as a tool to bring students together to work on tasks, to build soft skills that will continue to benefit them, and to be motivated to learn.

Finally, four teachers also used *Tabshoura* in combination with other resources and activities to enhance learning. Their use of other learning materials demonstrated how they used

Tabshoura as another tool for achieving their objectives. Teacher H introduced this use of *Tabshoura* in Photo 6.8. This photo initially appears to be unrelated to the use of *Tabshoura*



Photo 6.8

Prompt 1: What teachers do with *Tabshoura*

“After listening to the audio text, cards were presented to the children, with each card containing a word. It is the children's task to pick the words mentioned in the audio text.”

since the platform and the usual technological devices like tablets are not visible. Instead, the teacher shows students actively engaging with bright yellow flashcards scattered around a table. The students are standing, touching the cards, and interacting with each other. Other classroom materials are in the background, and items like the bookcase, tv, and whiteboard help place the setting as a classroom. The photo captures students involved in a learning activity, and the caption helps explain that this flashcard task was to test the students' recall of vocabulary introduced in the audio lesson from *Tabshoura*. The caption explains that Teacher H used *Tabshoura* as the entry point for the lesson, but then they utilized additional strategies to continue the lesson and to engage students in new, physical ways. Furthermore, Teacher I said that they used tools like smart boards to project *Tabshoura* on a larger screen and to allow

students to handwrite responses on the board. This alternative way of engaging with *Tabshoura* was to allow students to practice their handwriting skills instead of only typing responses, which this teacher and Teacher L stated as a concern. Overall, four teachers described ways to use *Tabshoura* alongside their other resources to meet their goals and their students' needs.

Comparing photos that look similar from different teachers also reveals the decisions teachers make on how and why they are using *Tabshoura*, for the captions contributed to further understanding of the decisions being made in these moments in the classroom. For example, the following two photos show a similar scene: a cluster of students sitting close together but individually working on tablets with *Tabshoura* displayed. Teacher E's Photo 6.9 and Teacher F's Photo 6.10 show how they used *Tabshoura* to facilitate independent work. The captions



Photo 6.9
Prompt 3: What teachers like about *Tabshoura*



Photo 6.10

Prompt 3: What teachers like about *Tabshoura*

supported this view of what teachers are sharing in the photos, and they also continued to explain why teachers chose to use *Tabshoura* for this type of learning. Photo 6.9 was submitted by Teacher E, and they captioned their photo as follows:

The teachers have deployed the platform as a listening test. The teacher read and commented on the stories ,and then learners have been incited to solve the questions on the platform afterwards.

This teacher said they chose to employ *Tabshoura* for independent learning as a test for student's retainment of the lesson that they had presented to the students first. Teacher E explained how they used *Tabshoura* as an opportunity to understand what students learned and to check the progress of each student. Teacher F submitted Photo 6.10, and their caption is next:

The learners were attuned and following the teacher's instructions while solving the activities. They were piloted by the teacher as she guide them through the activities.

This time, the teacher said they used *Tabshoura* alongside the lesson, for they guided the activities and supported students throughout. Their students still had the opportunity to work individually on *Tabshoura*, but this teacher used *Tabshoura* as part of conveying the lesson instead of as a review. Each teacher described their objectives for how *Tabshoura* could assist the students' learning, and *Tabshoura* provided the opportunity and tools to allow them to make the decision on what approach would suit their students the best. Even when *Tabshoura* is used similarly in different classrooms, these teachers' explanations differed on the use because they described specific needs to meet.

Finally, Teacher L submitted the same photo for two different prompts: how teachers use *Tabshoura* and what teachers like about *Tabshoura*. Photo 6.11 shows a student engaging with *Tabshoura* on a tablet on a couch outside of school. Using the same photo for these two prompts initially appear to show one use of *Tabshoura*. Applying the prompt to the photos, Teacher L

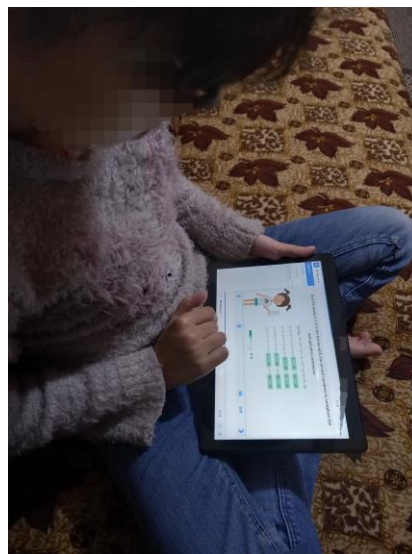


Photo 6.11

Prompt 1 and 3: What teachers do with *Tabshoura*; What teachers like about *Tabshoura*

says that she used *Tabshoura* to create an alternative learning space and that she likes how the platform can be used independently. However, the captions differed, and Teacher L provided clarification on the decisions they made. The caption for the prompt one about use reads:

In this session, children in second-grade mathematics are taught multiplication tables, specifically the 6 times table. They learn how to deduce the answer and find the solution for each equation.

In this caption, the teacher focuses on the content of the platform. They chose to use *Tabshoura* to help students not only learn their multiplication tables but also how to solve them. The next caption for prompt three about enjoying *Tabshoura* follows:

Children enjoy using the Tabshoura program, and now they use it at home as well.

Through this caption, Teacher L instead focused on how the engagement of students supports continued learning at home. The teacher used these two captions to describe two different intentions for using *Tabshoura*, for they highlighted content and pedagogy for supporting the student's learning. Seeing how the same photo was used for two different prompts by the same teacher captures how the teacher directed the use of *Tabshoura* based on different qualities of *Tabshoura* they needed for meeting the goals of their teaching.

6.1.3 Editing and Creating Content

The teachers in this study have described how they used *Tabshoura* to make their own decisions about their classroom and curriculum. One school in this study also engaged with *Tabshoura* by modifying the content on the platform to better support their students. Teachers at School 5, who teach BLN students, struggled with using the same curriculum that was designed on *Tabshoura* for five-year-olds for their 14-year-old students. Therefore, the teachers used the “same objectives but not babyish way,” according to Administrator 1. This decision meant that teachers would substitute examples on the platform with more age-appropriate stories, images,

and activities. When I interviewed teachers at this school, two teachers also included a presentation on how they edit lessons whenever they needed to better serve their specific students. With the use of a projector, they showed me their process for adapting *Tabshoura*. Even when I asked questions, they would pick up the demonstration right where they left off. They were quick to explain the hard work they had put into *Tabshoura*, and they appeared proud of what they were able to create. When I asked if her fellow teachers also enjoyed *Tabshoura*, Teacher U responded that they did:

Yeah, because they are creating their content. They're not using someone's else content now.... [W]hen we do the content, we are creating it. So that's fun for us and we get excited to do something new for the students.

Teacher V agreed that it's "very exciting to create your own content." These two teachers describe *Tabshoura* as theirs, not as something created separate from them. They are in control of the platform and are excited that they can support their students in new ways.

Teacher U and V explained how they were trained by LAL on how to change the platform to reflect the age and the needs of their students. Teacher U said that it was "up to the teacher" on which activities were included in the lessons, and their goal was to include a variety of methods to support engagement "so the students didn't get bored from one activity." For example, they described the process to switch a simple question and answer section for a more interactive one with activities like "drag and drop," word search, or memory games. They compared these features of *Tabshoura* to a "game," for their students were having fun and were encouraged to continue learning. They also detailed how they would create age-appropriate lessons for students who had large gaps in their education, as Administrator 1 described earlier for their "slow learners." These students needed additional support, so Teacher U and V said they replaced videos and other visual elements with content that respected their age and their

backgrounds. They would also add more images to lessons to provide further guidance. Teacher U explained her process:

[W]e will try to put pictures, a lot of pictures in each question so the students will see the picture and the word at the same time. If I'm going to put the word without the picture, the students will not understand what is the word about. Because it's all on the computer. It's all the computer. He needs this picture, he needs something to see it, to understand the word.

These teachers recognized what their students needed, and now they were able to adjust the content to better support students' learning. School 5 is an educational center that teaches mainly Syrian refugees. There was an audio recording associated with each lesson and activity to help students connect to the curriculum, and Teacher U said they would "record audio in English, and then we translate it to Arabic so that students can understand it well." Not only would they record in English and Arabic to help students who were new to English, they explained that they would also re-record lessons that were already in Arabic on *Tabshoura* so that students would have an audio that reflected the way Arabic was spoken in Syria.

Teacher U and V explained these changes with *Tabshoura* and appeared proud of their ability to make decisions with *Tabshoura* and to offer a personalized and creative approach to education. Whenever I would ask a question, they would readily provide an answer and then dive back into their demonstration of all the work that they have done and continued to do on *Tabshoura* to support their students. They focused on how their actions with *Tabshoura* impacted their students, but their confidence and capacity for wielding *Tabshoura* to enhance their classrooms sometimes even overtook the interview.

6.2 Teachers Have Confidence in Tabshoura

In this section, I will provide examples of how teachers in this study expressed what I called "confidence" in the reliability, usefulness, and personal benefits of *Tabshoura*. Having confidence in *Tabshoura* is important since the schools in this study are education centers, which

means they are approved by but not run by the government. They need to follow the guidelines that are established by the government's Ministry of Education and Higher Education, but these schools do not receive (much) funding or support to ensure that the education they are providing meets the standards. Following approved curriculum while simultaneously managing a crowded, under-resourced school with refugee students that may be dealing with trauma and instability at home creates challenging circumstances for the teachers. Furthermore, some of the teachers in these schools are refugees from Syria themselves, so in addition to dealing with their own instability, they may not be well versed in the Lebanese requirements. LAL aligned *Tabshoura* with the Lebanese curriculum to support teachers. In this section, I will describe how the teachers explained why they did (and did not) engage with *Tabshoura*.

6.2.1 Reliability of *Tabshoura*

First, I analyzed the data for where teachers spoke about their confidence in the reliability of *Tabshoura*, which I have defined as trusting the relevancy of the platform's objectives and content to the required Lebanese curriculum. Eleven out of 22 teachers in this study explained that they had this confidence in *Tabshoura*. For instance, Teacher R, who has children in a formal traditional school, summarized her trust in *Tabshoura*:

Tabshoura is because [we] rely on the Lebanese curriculum, it is based on the Lebanese curriculum. There's no difference between [my]students who are learning on Tabshoura, and [my] children who are in a regular school and learning the Lebanese curriculum, but not on Tabshoura. [I feel] like it's the same program, the same information they're getting. [I don't] feel that there's a gap between the two, which is great.

This teacher who saw firsthand the curriculum that traditional schools offer compared to what *Tabshoura* can provide is impressed that the curriculum is the same. She acknowledged that *Tabshoura* contains the required content and uses *Tabshoura* to facilitate opportunities for students who are unable to attend traditional schools. Teacher P, whose son is in a traditional

school, elaborated that she was disappointed in the resources his teacher sent home during strikes that prevented in-person attendance. She said that *“the videos that the teachers would send [my] son at home, they weren't clear, the objectives weren't clear.”* She would have to help her son understand what he needed to learn, which was not her experience with *Tabshoura*. Teacher P described *Tabshoura* as a superior curriculum to what is taught in traditional schools. Teacher R and P did not explain *Tabshoura* as only a collection of videos, for this platform included guidance for students clearly through the content. Instead, Teacher P noted that their students knew what and why they were assigned tasks and could complete them at home.

In addition to clear objectives, five teachers explained how they could rely on the relevancy of *Tabshoura*'s content. They said the lessons on *Tabshoura* were structured in a familiar way for both them and their students and that the content was related to their and their students' lives. For instance, Teacher P described that she usually began teaching Arabic by reading a story, and *Tabshoura* also starts with a story that is tied to the previously stated objectives:

If [I want] to teach the letter 'F,' the story already has the words with letter "F," and [I] just focuses and has the students repeat them and see them. Instead of it just being a story that's just being used, it's actually focused on the objective that is required, and it's integrated into the stories.

The structure follows the expected pattern and is integrated with the objectives to support clear and focused lessons that she and her students can follow. Teacher O explained how important it was that the images to support learning the alphabet matched real objects that the students would see in their lives: “One of our students goes to the birds, and says ‘it’s letter T, it’s letter T!’” She said she witnessed a student relate the letter “T” they were learning in class to the real-life bird that was used as an example on *Tabshoura*. She praised *Tabshoura* for being “related to our

life.” These five teachers expressed their trust in *Tabshoura* to be an asset to their teaching and to their students because the content was aligned, clear, and relevant.

6.2.2 Usefulness of *Tabshoura*

Second, I analyzed the data for how the teachers in the study spoke about the usefulness of *Tabshoura* for meeting their purposes. In the photo and caption submissions and in the interviews, each teacher described to me how they wanted to use *Tabshoura*. For instance, *Tabshoura* appears in over 80% of the photos, and it is often displayed either on a projector screen, tablet, or mobile phone. I coded over half of the photos as having a “desk/table” at which students sat, for teachers often shared images of a traditional classroom setting. *Tabshoura* was included in the classroom setting as another resource among other learning materials, such as smart boards, whiteboards, bookcases, and educational posters and artwork. Teacher F’s Photo 6.12 shows an example of how *Tabshoura* can be seen integrated into the classroom space as another tool for teachers to utilize. The teacher is surrounded by learning materials on the wall



Photo 6.12
Prompt 1: What teachers do with *Tabshoura*

and a whiteboard next to her. She is holding a laptop that has *Tabshoura* displayed and is gesturing to the screen while students are gathered around her, looking at the screen and raising their hands. Seeing how *Tabshoura* is included among other resources shows not only that *Tabshoura* is physically a part of the learning space but also that this teacher does not solely rely on the platform. *Tabshoura* has not replaced all previous approaches to learning, for the teacher in the photo is using the platform for specific purposes, as indicated in the caption.

The teacher has assigned an area to practice on the platform. Based upon the teacher's observation that cued learners' total engrossment, the learners were then asked to solve the activities independently.

This teacher has incorporated *Tabshoura* into the classroom by designating both time and place for its use. She is directing the use of the platform to meet a particular objective in engaging the students in an introductory lesson that prepared the students for individual practice.

Administrator A at School 5 said the following about how they use *Tabshoura*:

[*Tabshoura*] is an alternative use in classes, we use tablets twice or three times per week. It depends on the objectives and the lesson the teacher is implementing.

Her teachers are using *Tabshoura* as an optional tool in their classroom. *Tabshoura* is part of the classroom but is not *the* classroom.

Ten out of the 22 teachers expressed confidence in the usefulness of *Tabshoura* specifically in relation to its modern technology. Technology was a large factor in teachers' use of *Tabshoura* in the photo submissions, for some form of technology—tablet, mobile device, and projector—appeared in over 80% of the 91 photos. While technology was only explicitly named in seven photo captions, 10 teachers expanded on the focus on technology in the summary question on the photovoice form and in the interviews. Teacher K wrote, “We are living in an era where technology is everywhere, and it is important to integrate some new technologies in class.” Teacher O also said she thought technology was good for the classroom:

I think *Tabshoura* is a modern technology, and it is a modern learning with additional learning. Our education, they have a good combination. Because kids be bored from writing, they like to practice technology, I think it's a good combination. And they complete each other.

She explained her use of *Tabshoura* as addressing the need for stimulating and exciting students through modern technology and novelty presentation of the content. Teacher L also used Photo 6.13 and the corresponding caption to talk about using *Tabshoura* as a way to introduce students to technology and modern education. Here, a student gave a “thumbs up” to the camera and displayed their *Tabshoura* activity on their tablet at home. The student appeared happy with the platform, and the caption confirms the student’s reaction and reinforces the idea that the student was also learning about technology. In their interviews, Teachers O, R, and S each referred to *Tabshoura* as a “modern” education. They said they used *Tabshoura* because of what it brought

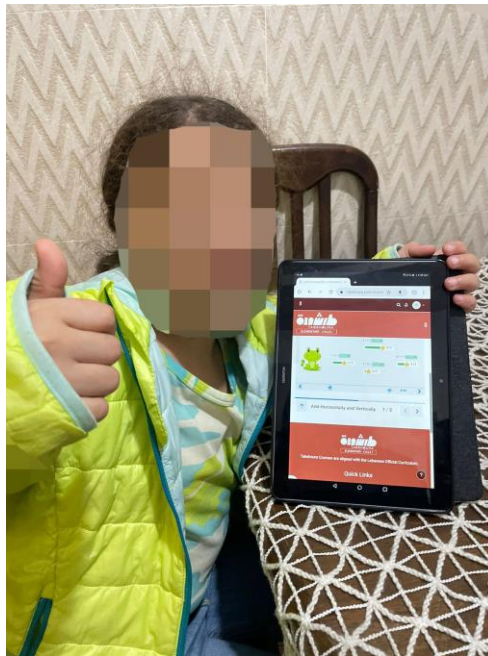


Photo 6.13

Prompt 4: What students feel about *Tabshoura*

“Parents and children enjoy using the program, and they now have better knowledge in using technology.”

to the classroom as relevant and timely technology. Alternatively, Teacher L wrote about how the technology of *Tabshoura* is the reason they do not solely use it:

The program is a successful technological aid in explaining the lesson, but it is not sufficient as a curriculum because it lacks writing. It helps strengthen typing skills, but it creates difficulty in handwriting.

The concern about handwriting is one that Teacher L raised throughout their photo and caption submissions, and LAL staff confirmed that they have heard this worry before. Teacher L recognized that *Tabshoura* was not a replacement for other teaching methods, so they decided when the platform would be beneficial to their students and when other approaches were needed.

6.2.3 Personal Benefits for Teachers

Third, I analyzed the data for how the teachers in the study spoke about how *Tabshoura* personally benefitted them and their teaching. The majority of teachers, or 18 out of 22, described how the platform helped them personally. For instance, Teacher P said that “*Tabshoura became kind of like, as an assistant to the teacher.... instead of [me] teaching and speaking all the time.*” *Tabshoura* was an additional tool for her, and the next examples show how most teachers in the study detailed the fun they had with the platform, how they explained their easy access to *Tabshoura*, and how they described strengthening their teaching with the assistance of the platform. As Teacher T said, “it’s easy to spend time on [the] platform.”

Excitement for *Tabshoura* and the possibilities for their teaching was a theme with approximately 15% of 87 interview codes related to teachers’ feelings of engagement with *Tabshoura*. Teacher S said, “It’s good to fight the routine of teaching. *Tabshoura* can break that routine.” She talked about how the platform disrupted her usual approach to teaching and offered a new way for her to engage. In the summary question on the photovoice submission form, half of the 12 teachers used words like “fun,” “enjoyment,” or “encouragement” to define their

overall experience with *Tabshoura*. Teacher U said in an interview that “It’s like we’re having fun. Not only teaching.” Teacher U and V demonstrated together how they would create lessons with *Tabshoura*, and they would laugh when they discussed having “fun” with the different activity options available on *Tabshoura*. They told me how the same stories, characters, and interactive activities that students liked were also appealing to them. They said they enjoyed their time with *Tabshoura* and looked forward to using it. Teacher H submitted Photo 6.14 in response to the optional prompt. The photo shows a teacher at the front of a classroom with a smartboard with *Tabshoura* displayed observing a student pointing to the board. Both the teacher and student are engaging with *Tabshoura* together, and the caption adds further information. The teacher calls this moment her “favorite lesson.” The teachers did not use self-referential words like *I*, *me*, and *my* anywhere else in the 91 photos and corresponding captions. They focused on personal

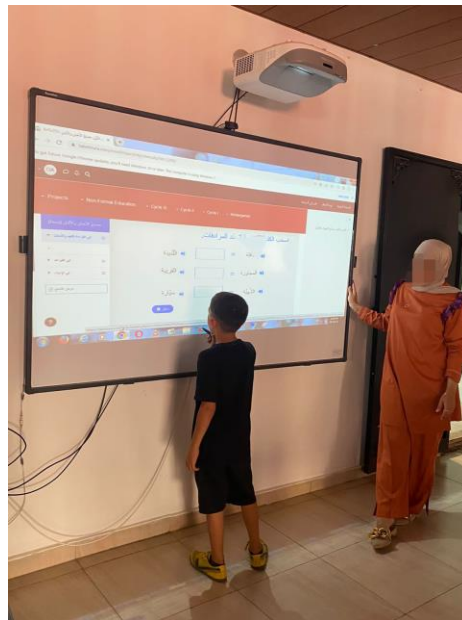


Photo 6.14
Optional Prompt: What else teachers want to share
“My favorite session”

benefits in the photo summary question and interviews, instead. Teacher H, though, used the

optional photo opportunity to submit a caption to describe how she felt about this moment of teaching that was captured in the photo. She wrote about enjoying a lesson using *Tabshoura* and included this insight, even though it was not required.

Fifteen teachers talked about how the ease and accessibility of *Tabshoura* helped them use the platform whenever it was needed and wanted. Teacher N said that *Tabshoura* “*was easy [...] to go to the platform and learn it by [my]self. [...] It was very easy and that's something that [I] liked about it.*” Teacher T also described the convenience of *Tabshoura*:

And it's very interesting for students and teachers as well. And it's very useful. Yeah. Because the subjects are already prepared. Yeah. So it makes the teaching process easier for the teachers. And it's attractive to the students, so it's great.

Similarly, Teacher L talked about the benefits of the platform’s combination of education and entertainment: “*Tabshoura* is an application that eases our lives in many ways. It has already completed lessons with beautiful activities that entertain students.” Being able to rely on the platform when appropriate provided comfort to Teacher A, as they wrote in response to the summary question:

It was something new and strange at the beginning, but after practice, I found that the platform gad [sic] helped me [and] my educational experience and was a good source that I would refer to when needed.

The previous four teachers were grateful to have understandable and useful resources as an option in their classrooms. Furthermore, Teacher E wrote “Useful, fun, sophisticated, easy to use” as their response to the summary question. The combination of these words captured how “fun” was also associated with *Tabshoura* being beneficial and accessible. *Tabshoura* was not a burden or an irrelevant distraction. Instead, the majority of the teachers said they used *Tabshoura* because it was easily accessible when needed and it fully engaged them when they did.

Furthermore, in response to the optional summary question on the photovoice form, 10 out of the 12 teachers referenced how helpful *Tabshoura* was to their confidence in teaching. Teacher D said that working with *Tabshoura* “was a fruitful experience. [I] have learned new teaching tasks and still...the activities are effective and fun for students and the teacher.” The teacher grew with the use of *Tabshoura*. In an interview, Teacher R summarized her experience with *Tabshoura* with the following list:

1) it's easy to use. 2) It facilitates the teaching process. And 3) it's giving [me] a way to explain because sometimes [I] would struggle how to convey the information to the kids, how to phrase it. Tabshoura helps in the explanation process. It is easy to use, it facilitates the teaching process and the explanation process.

Tabshoura was an accessible platform that helped her with content that can be difficult to explain, especially with students with different educational and personal backgrounds. Similarly, Teacher S explained the importance of the sound feature on *Tabshoura* that audibly provides the pronunciation of the vocabulary. She was educated in a French school, meaning French is her second language and she said she is not as comfortable with English. She explained that “[I] might understand and know how to read the word but cannot figure out the pronunciation. And because you have the sound feature, you can know what it sounds like.” *Tabshoura* helped her navigate her different educational background and still be able to impart information that was not as familiar. As Teacher G said, “*enhancement*” and “*development*” were key parts of their experience with *Tabshoura*. Teacher F said, “For me, as I am using [T]abshoura for the first time it was a great experience that give the chance to try new ways of learning that is different and helpful in many ways either for kids or for the parents.” This teacher was introduced to new approaches to better support their students. Teacher R said that “*getting to work on Tabshoura improved [my] technology skills to the point that [I] could put it on [my] CV that [I] knows how*

to teach on Tabshoura. It's an asset for [me].” Most of the teachers described how they were learning and growing their skills through using *Tabshoura*.

6.3 Teachers Have Community through Tabshoura

Thirteen out of 22 teachers in this study reported how their relationships with LAL, their fellow teachers, the parents of their students, or the students themselves contributed to deeper connections that improved their teaching experience. These teachers explained how they did not work with *Tabshoura* alone. Through the collaborative use of *Tabshoura*, the thirteen teachers described how their relationships with different members of the learning community changed. First, six teachers expanded on their close connection with LAL and on the organization’s support of their use of *Tabshoura*. Second, five teachers described how they worked together within their schools and with their administrators to develop new strategies for creating relevant content and connecting with students, even when they were not physically together. Third, 12 teachers detailed how they formed a closer, more collaborative relationship with parents of their students, for with *Tabshoura* in the home, parents’ awareness and appreciation of their students’ education and educators increased. Lastly, despite periods of physical distance, six teachers said they were closer with their students because they used *Tabshoura* to monitor and connect with students.

6.3.1 Community with LAL

First, all the teachers in this study had a relationship with LAL. Although working with LAL is not required to use *Tabshoura*, these teachers were invited to participate in this study because LAL knew them and could provide me with an introduction. In the previous chapter, LAL described how they offered trainings to teachers and collaborated with schools and NGOs to provide further support and custom edits to *Tabshoura*. In this chapter, six teachers also

discussed with me the importance of having LAL for help and guidance. There is a designated contact at LAL for supporting schools and teachers, so there was consistency and regularity in communication. In fact, three teachers mentioned the LAL contact by name and praised her for her willingness to help and for her speed in resolving issues. For example, Teacher R said that they wanted more science lessons to be added to *Tabshoura*, and LAL “added a lot of lessons. And everything. Whether it's small or big problem or anything, [LAL] helps us.” She and her administrators had direct contact with LAL to shape the progress of *Tabshoura*. Administrator 1 at School 5 explained:

It's like a channel. We are in collaboration and coordination with the IT unit, with the HR unit, and with the technical team. It's a channel, the coordinator. If we have to change anything on *Tabshoura* that is made by LAL and we want to change it, so we have to send an official email to the technical team in LAL, by our IT unit. You know, in this way we can adapt and change.

Her school established a system for the staff to work together with LAL to support changes and adaptations needed.

The teachers interviewed in this study also participated in the trainings that LAL offered to help train them in the necessary technical skills. Six teachers talked about these trainings and what they would learn from LAL, and as Teacher Q said, they could then practice being “*more and more comfortable using the platform and more aware of its features and how to use it.*” LAL had described earlier how the teachers may participate in further trainings to adapt the content of *Tabshoura* depending on the goals of the teachers and schools. School 5 explained they had this additional training, which could last a few months, and these teachers also received recognition of the skills they developed. Teacher U said “[w]e took a course with LAL for one month or two months. And they gave, they gave us a certificate after we finished the course.” Teachers at School 5 learned from LAL about new ways to use *Tabshoura*. When I asked teachers in

interviews about what they would change about *Tabshoura* if they could, most of their suggestions focused on continuing to streamline and automate the login process. The teachers in these examples from the interviews described an ongoing relationship with LAL and with the development of *Tabshoura*.

6.3.2 Community within Schools

Five teachers also discussed the support within their schools to use, adapt, and integrate *Tabshoura* into the classroom. For instance, Teacher U, V, and Administrator 1 at School 5 described how they worked together to develop individualized content, to implement alternative schedules, and to be available for students outside traditional school hours. The School 5 teachers told me that they had to implement an internal process for adapting *Tabshoura* lessons and for monitoring students' progress with their lessons. When teachers wanted to make edits to the content, they had a coordinator who helped review and approve all new materials. Teacher U explained: "And the coordinator checks everybody. The coordinators have two tasks: create lessons and upload the teachers' courses and check if this is wrong, modify here, change this. Takes time." The coordinator had to manage her own courses along with verifying the new content and lessons that other teachers developed. These same coordinators were the liaison for teachers to talk with LAL, so they had multiple roles to support teachers. Through engaging with *Tabshoura*, the teachers at School 5 created new roles and responsibilities, distributing tasks and working together to support students. School 1 teachers and administrators also collaborated to use *Tabshoura* for alternative schedules. In my interviews at School 1, the teachers and teacher assistants told me about their specific roles for supporting the use of *Tabshoura*. In particular, teacher assistants said they were in each classroom to help set up and manage the technology for teachers to use *Tabshoura* as an introduction to the lessons that students will continue at home.

At both Schools 1 and 5, the teachers, staff, and administrators detailed how they established new roles to develop a new structure and new approach to their teaching through *Tabshoura*.

6.3.3 Community with Parents

Twelve teachers using *Tabshoura* to facilitate alternative learning spaces at home talked about how the parents' connection to their children's education has increased. First, most of these teachers described how parents were often the providers of devices for students to complete their work on *Tabshoura* at home. Students may borrow their parent's mobile device, as shown in Photo 6.15 from Teacher L. This student using a mobile phone appears to be away from school, and the translated caption confirms it. Teacher L said that parents are exposed to what students are doing at school because the same content and same platform is being used at home.



Photo 6.15

Prompt 3: What teachers like about *Tabshoura*

“Children now have more and better information by using educational programs and technology, and they use them at home on their parents' phones during their free time.”

According to Teacher Q, the interactions between parents and teachers were minimal and revolved around small talk about the students' progress before *Tabshoura*, but the parent-teacher relationships have evolved with *Tabshoura*:

So the situation in itself made [us] closer to the parents. Somehow, before Tabshoura, the relationship was limited. It would be limited to "how is my kid doing? Is he..." you know, like normal chitchat between parents and teacher. But with Tabshoura, something that in itself made them closer just by having to talk to them on WhatsApp. Because the phone is usually the phone of the parents, just sending voice notes and the screenshots. And when [I] send the videos with the instructions to the parents, when the parents had to register their kids and some had problems, they would call [us], ask for help, which automatically brings teachers and parents closer, rather than if they were still in class. In class, it's the basic chitchat "I was doing, he was being," whatever.

With school blending into homes, Teacher Q noted that parents and families were more involved.

Teacher D explained that parents' exposure to *Tabshoura* often transformed into technical support for children at home, especially for the younger students. Photo 6.16 from Teacher D shows a student sitting on the floor without shoes on and pointing at a mobile phone



Photo 6.16

Prompt 4: What students feel about *Tabshoura*

"Ruba and her parents have proved to be receptive since they showed resilience when the platform could not run easily on their device. Now the issue was resolved and Ruba can surf the platform independently at home."

with *Tabshoura* displayed, and the caption confirms that she is engaging with the platform at home. The teacher uses the caption to continue to describe that the student's success with accessing *Tabshoura* at home is due to the parents' role in installing the platform on their device. However, it was not an easy process for these parents, and it required the parents to work with teachers to "resolve" the issue. Furthermore, eight teachers in interviews discussed how teachers and parents had to work together to navigate technology and establish learning at home. They described how parents talked with teachers in order to help their children access *Tabshoura* at home and how struggles to provide the technical support that parents may need themselves have increased communication between teachers and parents. This exchange between Teachers U and V highlights the different approaches teachers took to support parents in accessing *Tabshoura* on their mobile phone for their children:

Teacher U: We faced many difficulties but the big one is to teach parents and the children how to enter their username and their password.

Teacher V: So we recorded a video about how to answer the username and password and also giving each student it's username and password several times.

Teacher U: Also parents came here to the school and teach them how.

Teacher V: But also we had a meeting with parents as to how to enter the password and username and each child which grade you will enter [for them] to interact with platform.

At School 1, teachers said they also used video tutorials and direct communication with parents to help them learn the technology skills needed to log their students into *Tabshoura*. For example, Teacher P said they would respond to teachers' requests for help:

The tutorial told them that the parents would have, had to copy paste the name or the username or the password or whatever. But what you'd have is, you have parents who are actually just trying to type it in. So they might add a space in the wrong place, then they call [me], they say it's not working, help us. So then [I] would help them to just copy paste and put it where it's supposed to be in the link.

Teacher T also said that logging into the account may appear to be a simple task but that “it's not very easy for parents here, not all parents are digitally.” Teacher T acknowledged that parents were new to technology and may struggle with setting up the account for their child.

Teacher P explained how the deepened relationship with parents went beyond technical support. Through parents' exposure to *Tabshoura*, they were also exposed to the complexity and demands of the teachers' job, and Teacher P described parents' newfound gratitude for their children's teachers:

[B]ecause the parents also, they had heartfelt gratitude towards [us] because they're taking from [our]time. Many times they say thanks for [my] time and everything. They were able to kind of see the other aspect where [I am] giving and they were very happy, happy and thankful for that.

With *Tabshoura* used at home, Parents of Teacher P's students were more aware of their students' learning, so their appreciation of the teachers increased. The consistency of using *Tabshoura* at school and at home helped bridge student support systems. Teacher P continued to describe parents' gratitude, for they also expressed appreciation for *Tabshoura*'s success with their children.

[P]arents are really happy about Tabshoura platform, too, because instead of their kid being on the phone and just playing and wasting their time, their child is actually on the phone, but in an educational, on an educational platform. And they're learning, the parents are encouraging their kids to use Tabshoura and to learn via Tabshoura. So [we] have noticed that the parents are actually supporting [their kids].

Teacher P explained that the increased awareness of parents means that they now had a new view of what teachers did and how it helped their children. They could see firsthand how their children were more engaged with their education, even foregoing their usual games on their parents' phones. Parents of Teacher P's students were happy with the progress their children were making and attributed it to the teachers and their approach to using *Tabshoura*. One parent even requested that *Tabshoura* be used in next school year: “there are even some parents who

ask that even when this year is done and their kid isn't any more [in the class], can they still enter Tabshoura and take the other courses.” Teacher P explained how parents were excited about *Tabshoura* and grateful for teachers and their use of *Tabshoura* for their students.

Finally, learning at home did not stop with the intended student. Three teachers also shared that the parents’ exposure to *Tabshoura* also supported their own learning. Many of these parents of refugee students do not have much educational background themselves, so they have been struggling to find work and their place in their new home in Lebanon. As Teacher N said, helping their children connect to *Tabshoura* and then watching their own phones be used for lessons has increased their own access to education:

[N]ot only does Tabshoura have a positive effect on the students, but as parents are sitting next to their students at home, next to their kids at home, they're actually listening and learning. So it's also had a positive impact on parents.

Administrator 1 also said that parents have even expressed their excitement to her about learning with their child: “Some parents were learning with their students. And some parents came to our center and said that, ‘Thank you. We are learning with our students at home.’” These two teachers explain how *Tabshoura* has connected parents to teachers and even to learning in a new way. In the photovoice summary question, Teacher F highlighted parents, for *Tabshoura* provided the opportunity to “try new ways of learning that is different and helpful in many ways either for kids or for the parents.” Teacher F recognized how *Tabshoura* was not just for improving students’ success; instead, they could facilitate new ways of learning for parents of students as well. Teacher F also explained that that the reach of *Tabshoura* also extended to more of the family. For instance, this teacher used Photo 6.17 and its caption to show siblings who may attend different schools or classes that do not use *Tabshoura* are learning from their siblings who do have access to *Tabshoura*. The photo shows two children sitting on a couch with the

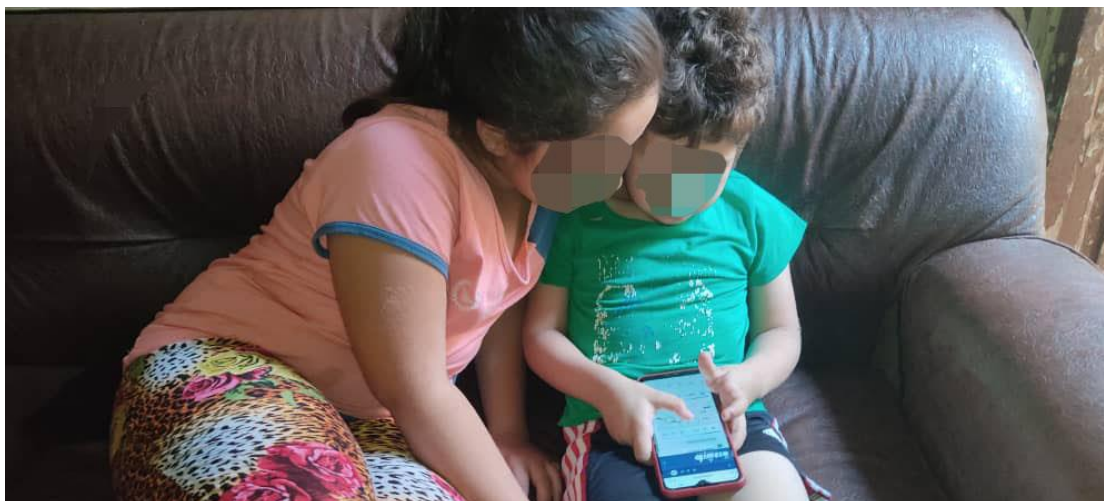


Photo 6.17

Prompt 4: What students feel about *Tabshoura*

“The learner's sister has been impressed with the platform. The parents reported that [the learner] has induced his sister to solve and view the platform with him.”

younger student holding a mobile phone with *Tabshoura* visible. The older child is peering over to look at the phone as well. The caption indicates that the older child is the sibling of the student who uses *Tabshoura* at school, and she is so thoroughly “impressed” by it that she is now using the app to “solve” activities, too. Teacher F and D learned about how the platform can facilitate the learning of other children in the same household from the children’s parents, so *Tabshoura* is spreading throughout the family.

6.3.4 Community with Students

Six teachers specifically talked about how *Tabshoura* affected their relationship with their students outside the classroom. Teacher Q summarized how their interactions have increased with *Tabshoura* and how they have helped students.

For the student to talk on the phone, over the phone with his teacher is a bit amazing for them. Wow. I'm talking to my teacher, it's something we never did. Yeah, I never called my teacher...It automatically brings the teacher and the students close together. Because they talk over the phone, they keep each other posted, somehow they know. The teacher asks the student how are they doing? And the student updates the teacher on the lessons, the activities he's been completing, it's this unconventional relationship of talking to your

teacher over the phone. It's to discuss Tabshoura, but it's a bit unconventional, so it brings the teacher and the students closer together. This is how it changed her relationship to the students. Prior to Tabshoura, she didn't talk to the children over her phone.

Teacher Q explained how before *Tabshoura*, students and teachers did not traditionally have the opportunity to talk and discuss lessons outside of school and they had traditional interactions in a classroom. Now, with *Tabshoura*, Teacher Q said their students have increased access to them, improving their relationship. Furthermore, teachers could consistently monitor students' progress on *Tabshoura* and be available for questions, as School 5 established with the additional use of WhatsApp. Teacher U and V discuss their process for reviewing students' progress and their work.

Teacher U: [I]f they didn't get to *Tabshoura* and solve the lesson, we, we send them messages.

Teacher V: We mention each one, each not solved, you don't enter. Also take time to check all the answers for the students. Also we check each worksheet for the students and send to the group to encourage other students to solve.

These teachers used *Tabshoura* for more than the content, for the platform helped teachers meet the needs of their students with management, coordination, and communication support.

Teachers were even able to provide and review additional worksheets for the students who needed extra practice and were absent due to external responsibilities. When questioned about the amount of time this approach to education needs, Teachers U and V agreed their work is time-consuming, but they enforced a 9-5 work schedule. They recognized using *Tabshoura* for individualized learning is a commitment, yet they also have tried to establish boundaries to protect themselves and to give students clear expectations on their availability. Through *Tabshoura*, teachers could better understand students' needs and offer more individualized support.

As an example of teachers' success with offering more personalized education through *Tabshoura*, Photo 6.18 from Teacher H is a thank you note that a student wrote to her teacher, and the student decorated it with a drawing of them swinging under a rainbow with the teacher. The translation of the letter and the caption are also found below the photo. The student shared

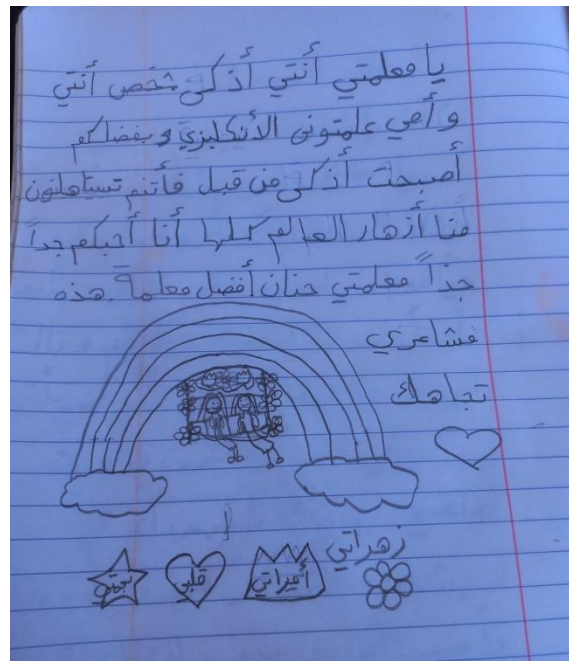


Photo 6.18

Prompt 4: What students feel about *Tabshoura*

Letter: *"Dear teacher, you are the smartest person, both you and my mom taught me English, and because of you, I have become smarter than before. So, you both deserve all the flowers in the whole world. I love you both very, very much. Teacher... the best teacher ever.*

My feelings towards you."

Caption: *"A message from a little girl expressing the depth of her love and revealing her feelings. She wrote a letter expressing her love for the subjects that she once considered difficult. Through the diverse methods of active learning and the use of Tabshoura, she broke the barrier of fear of expressing her opinions and answers, fearing they might be incorrect."*

her appreciation for her teacher because she is "smarter" now. The teacher added context to this thank you letter by explaining that the student used to not participate in class in fear of being

wrong, but now the student loves learning. The teacher gave credit to *Tabshoura* and its active learning design for the student's change of heart about school. This "love letter" a student wrote to their teacher describes how she felt supported. As Teacher Q said, there was more connection among teachers and students, and as Teacher H explained, they could better support students' learning and growth with *Tabshoura* facilitating this connection.

6.4 Conclusion

The teachers in this study explained how they incorporated *Tabshoura* into their classroom. The teachers reported the decisions they made about how to use the platform to facilitate alternative learning spaces outside the classroom, appropriate pedagogical approaches, and additional content to benefit their students. They explained how they reordered lessons and simplified activities and how they used *Tabshoura* for independent, self-directed learning as well as group collaborative learning. They were able to make these decisions because of the confidence teachers expressed in the platform's reliability, usefulness, and personal benefits. Finally, teachers described the relationships they formed with LAL and the relationships that changed within their schools, with students' parents, and with students. Each teacher shared their own experience with *Tabshoura* because they directed its use. The platform was not a replacement for them or their preferred methods of teaching, for it was a tool to support their purposes. With the foundation that *Tabshoura* provided, teachers were able to focus on how they taught instead of only on what they were teaching.

The next chapter uses the framework from Arinto et al. (2017) to discuss the way these teachers engaged with *Tabshoura*. As previously described in Chapter 3, this case study is at the classroom and school level of OER that was already localized by a grassroots organization.

These teachers' engagement with Tabshoura offer an opportunity to understand a particular use of OER in very challenging circumstances.

Chapter 7 Discussion

As I described in the introduction of this paper, UNESCO has defined and promoted OER as an opportunity to increase the participation and inclusion of teachers as knowers. This case presents an opportunity to follow UNESCO's description of "open" by asking both how *Tabshoura* is "open" as presented by LAL and then as engaged by teachers. Studying the perspectives of LAL the organization as the developers and the perspectives of teachers in this study as the users of *Tabshoura* contributes to further understanding the role of the platform and of re-localized OER for supporting teachers, especially when they are navigating unique and tough circumstances. In Chapter 5, I described how LAL staff, most either former or current teachers themselves, worked with and for teachers to create and develop *Tabshoura* as a resource to support their purposes. In Chapter 6, I presented how the teachers in this study explained their engagement with *Tabshoura* as they navigated their varied circumstances and their students' individual needs and goals. *Tabshoura* was freely available and accessible, so teachers in this study described how they shaped and directed the use of the platform with their experience and knowledge.

In this dissertation, I studied how the levels of social inclusion through OER engagement as presented by Arinto et al. (2017) could be used to analyze the evidence from LAL the organization and from teachers in this study. Arinto and colleagues developed a social inclusion model by studying cases of OER use to consider how participants were valued and included in the production of OER. Arinto et al.'s (2017) model in Figure 3 shows three degrees of social

Figure 3

Levels of Social Inclusion through OER Use, Adaptation and Creation, with the Structural, Cultural and Agential Factors that Impact on Each Type of OER Engagement



Note. Reprinted from “OER and OEP in the Global South: Implications and recommendations for social inclusion,” by Arinto, P.B., Hodgkinson-Williams, C., & Trotter, H., 2017, In C. Hodgkinson- Williams & P. B. Arinto (Eds.), *Adoption and Impact of OER in the Global South*, p. 577-592, Cape Town: African Minds Publishers.

inclusion in engaging with OER: use as developed, adaptation, and creation. Arinto and colleagues described the degrees as listed from “most basic” to “more expansive” to “the highest level of social inclusion” (p. 580). They used this model to explain the potential for OER as facilitating a more inclusive knowledge production. The first level, “use,” is about increasing access to educational resources. “Adaptation” is the participation of the user in localizing the OER through edits, translations, and learner-centered pedagogy to foster a more personalized experience for students. Arinto et al. (2017) describes “creation” as users’ empowerment through contributing to knowledge production. This highest degree of social inclusion is meant for the user to “reach their full potential” and is for “fostering one’s dignity and generativity” (p. 580).

In their recommendations for further study, Arinto et al. (2017) advocated for more studies that focus on “OER originally created in the Global South” (p.589). In this study, I follow Arinto et al.’s advice as I focused on OER from Lebanon. I studied how LAL intended teachers

to be included and how the teachers in this study participated in engaging with *Tabshoura* for specific purposes in their schools and classrooms. I focused on the inclusion of local users as well since the teachers in this study and their knowledge shaped how they re-localized, or engaged with previously localized, OER for meeting the needs and goals of their students. What I learned from this study of modifications of previously localized OER in schools and classrooms suggested a way to supplement the social inclusion model.

In this chapter, I bring together how LAL as an organization intended *Tabshoura* to be used and how the teachers in this study engaged with the platform, supplementing how Arinto et al. (2017) described the levels of engagement with OER. First, I will present a supplemental model to the social inclusion model that reflects the nuances of how teachers in this case study engaged with OER to serve their purposes at the classroom and school level. Next, I will explain the changed features in the supplemental model by identifying how LAL's intentions and the teachers' accounts of their experiences with *Tabshoura* correspond and complexify each term of engagement. Finally, I will offer next steps to continue to better understand the inclusion of teachers in the engagement of OER for addressing needs in different circumstances.

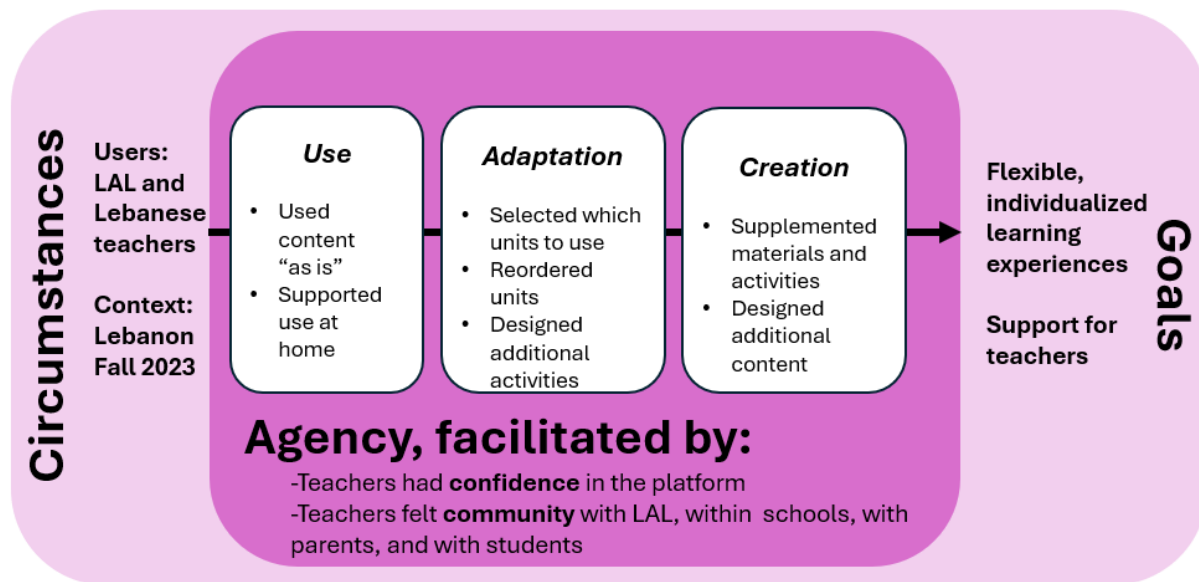
7.1 Supplementing Arinto et al.'s (2017) Social Inclusion Model

Using Gidley et al.'s (2010) original term, Arinto et al. (2017) positions the types of engagement as “degrees” of social inclusion that focus on the potential of increasing the users' involvement with OER (p. 580). How teachers explain their engagement with *Tabshoura* reflects their positioning within classrooms and schools and the platform's local origins. Teachers in this study were engaging with *Tabshoura* at a different level than the cases in Arinto et al. (2017). The participants were engaging with OER within their classrooms and schools instead of contributing to the development of a program of OER. The teachers in this study explained that

their purpose for using *Tabshoura* is to support their students to navigate the multiple crises in Lebanon. Figure 4 represents what these differences in positioning and purpose mean for engaging with OER as represented by this case.

Figure 4

Agency through Engagement with Localized OER within Classrooms and Schools



There are three distinguishing features of this model that supplement Arinto et al. (2017). First, the terms of engagement from Arinto et al. (2017) are represented in the horizontal white boxes that are parallel, on the same level, and positioned on an arrow as they reflect the means for the teachers to select to move towards their goals. LAL’s plans for *Tabshoura* as presented in Chapter 5 show how LAL intended for the platform to support teachers during the economic and refugee crises in Lebanon in Fall 2023, and the analyses presented in Chapter 6 show how teachers in this study engaged with *Tabshoura* as a path towards an education that was needed to meet students’ needs. This path represents the different ways that the teachers in this study engaged with *Tabshoura* to reach their goals. Second, the descriptions of the terms in the white boxes in Figure 4 reflect the scale of the engagement of the teachers in this study, which is

narrower than Arinto et al.'s (2017) social inclusion model. Third, the types of engagement are in a box labeled “agency” because they reflect teacher decisions about the nature of their engagement. Their agency was facilitated by the sense of confidence in the platform and community with LAL, school colleagues, students, and parents.

In this section, I will elaborate on the characteristics of the supplemental social inclusion model for engaging with OER. I base these characteristics on how I understood LAL's intentions as an organization, presented in Chapter 5, coupled with how teachers described using the platform, documented in Chapter 6. The teachers in this study described their experiences with *Tabshoura* as a decision. They were able to engage with *Tabshoura* at the three different levels I described in my model in Figure 4. They were able to use it as written. They made decisions about which aspects of *Tabshoura* to use. They created resources and activities that supplemented the platform. As Teacher U said, it was “up to the teacher” how *Tabshoura* was integrated into the classroom. How teachers chose to engage with *Tabshoura* reflected teachers' agency for me. They determined how their use of *Tabshoura* would best support their goals for their classrooms and schools.

Like the cases from Arinto et al. (2017), the teachers in this study also described engaging with *Tabshoura* as a means to their ends. By means, I refer to the different ways teachers engaged with *Tabshoura* in order to provide support for their students. The difference is that, in this study, the focus is on the classroom and school level which is narrower than Arinto et al. (2017). This difference means the reasons for using OER in this case—the ends—are at a different scale. Therefore, the types of engagement, or the means, are also at a different scale. LAL staff focused on access in their explanations of *Tabshoura*, describing the platform as a tool for teachers to bridge the specific gaps their students faced. They also explained how they

worked to ensure that teachers were aware of the platform and that it was accessible in different technological circumstances so that teachers could decide how to utilize *Tabshoura*. In turn, the teachers in this study talked about their new pedagogical approaches to teaching by extending the classroom to the home with *Tabshoura*, which I call “use,” deciding which aspects of *Tabshoura* to use, which I call “adaptation,” and supplementing the platform with additional materials, which I call “creation.” In this case study, all the teachers chose to engage with *Tabshoura* to develop flexible lessons and diversify their pedagogical approaches through *Tabshoura*. For instance, 17 teachers chose how to use the platform to create independent or collaborative learning in order to maintain their students’ motivation and excitement. Overall, the teachers in this study were in control of why and how they used the platform for their desired ends, as I will detail in the next paragraphs about how I have described “use,” “adapt,” and “create” to supplement Arinto et al. (2017).

Arinto et al. (2017) described the first step of engaging with OER as “use,” which means local participants have access to the OER. This step includes awareness of OER and the technical means to access the resources. LAL staff created an accessible and available OER, but there were different degrees of access, depending on the relationship between a user and LAL as an organization. As discussed in Chapter 5, LAL staff considered accessibility for teachers by making *Tabshoura* freely available to anyone at anytime and anywhere. They also described alternative technical solutions for teachers to continue to use *Tabshoura* even in circumstances where electricity and the Internet might not have been consistently available. LAL staff also explained the various training courses that they offer, including one that is focused on introducing *Tabshoura* to those who do not already have a relationship with LAL staff. However, most of the trainings and assistance they offered relied on relationships that the organization has

with schools or teachers. Only those who were connected with LAL staff understood the full extent of the possibilities of the platform since they received direct support. For instance, those with relationships with the LAL team had access to tracking their students' progress because LAL staff had linked the students' accounts to their teacher.

All 22 teachers in the study also discussed how they used *Tabshoura* because they had access to the platform when they wanted and as they wanted. They each had their individual experiences with *Tabshoura*, and they each talked about the usefulness of the platform for themselves and their teaching. Seventeen out of 22 teachers also explained how they extended the classroom to the students' homes by using *Tabshoura* to stay connected to students when they could not physically be together. Teacher M even listed *Tabshoura*'s accessibility as her favorite aspect of the platform:

The first thing is that it's free access. It's very accessible to everybody. And time and space factor, you can be anywhere. You can use it at any time because it's online and you have free access to it. This is what [I] love about it.

Teacher T also said that *Tabshoura* was useful “because the subjects are already prepared.” Here, using *Tabshoura* as written localized the platform. Teachers' voices were included even in the use of the resources, for they directed how its use could benefit their students.

As an organization, LAL's intentions for *Tabshoura* showed that there were different kinds of access depending on relationships with the teachers in the study using the platform. The participants then demonstrated how using OER can be as empowering as creating resources, for they were still in control of meeting their students' needs. I present a more nuanced understanding of the “use” level in the supplement to the social inclusion model from how LAL and the teachers in the study explained using *Tabshoura*. Using OER looks different for each teacher in this study because they were using it for their particular classrooms and schools.

Second, “adapting,” as defined by Arinto et al. (2017), depended on the relationship between the LAL team and the users. Adapting indicates participation of the user and includes building users’ “technical skills” and “pedagogical practices” and supporting their participation through “institutional policies” and “support mechanisms” (p. 587). LAL staff described the trainings they offered for technical and pedagogical skills. They also had the MEHE’s approval of *Tabshoura*, providing more legitimacy and credibility to their platform. However, again, the type of adaptation that users participated in depended on the user’s relationship with LAL as an organization. The teachers from School 5 were the only participants in this study who shared examples of working with LAL staff to learn the skills necessary to adapt the content of *Tabshoura* to better support their students.

In this study, teachers instead discussed how they decided which aspects of the lessons on *Tabshoura* to use, reordered the units within and across the lessons, and even simplified lessons. These teachers adapted the order and complexity of the lessons on *Tabshoura* to serve the students’ individual needs. This view of adaptation moves past being “merely being a content delivery strategy or technology” (Cox et al., 2022, p. 143). *Tabshoura* was used for more than content when teachers adapted the way it was used to reach students. The teachers in this study showed how adaptation can mean recognizing the individual students’ needs and assets and incorporating them into the curriculum when using the platform. Most of the participants talked about how they met students where they were by adapting *Tabshoura* to support the varied and challenging educational backgrounds of students who have fallen behind in their education due to school closures or forced displacement.

Third, Arinto et al. (2017) define the highest level of the social inclusion model as “creation,” or empowerment of the user. The features of this level are described as “participation

in funded OER projects, collaboration and co-creation, personal motivation, and epistemic stance” (p. 587). LAL the organization explained how they had established *Tabshoura* in collaboration with teachers. Similar to the previous level of adaptation, LAL did not develop *Tabshoura* for users to continue to create content independent of LAL. Teachers from Schools 1 and 5 participated in funded OER projects since their schools were supported by additional nonprofit organizations. Teachers from School 5 had also collaborated and co-created additional content for the platform, though they first needed LAL’s support, guidance, and training.

Teachers in this study also engaged with *Tabshoura* in ways in which they supplemented what Arinto et al. (2017) described as “creation.” Apart from the teachers from School 5, the teachers in this study did not create original content for *Tabshoura*. Instead, four teachers in this study discussed how they used *Tabshoura* in combination with other materials to create activities and lessons that engaged, motivated, supported, and tested their students. They used the platform with additional materials and activities to create learner-centered lessons to best serve their students. In creating the lessons they needed for their students, *Tabshoura* was another tool for their plans.

Teachers in this study could decide how and why they wanted to use *Tabshoura*. In Figure 4, I described teachers’ decisions on how to engage with the platform as “agency.” Arinto et al. (2017) used the term “empowerment” to describe when participants were involved in creating materials and producing knowledge, or the highest degree of social inclusion in their model. They explained that this level of engagement represented participants’ agency to share their knowledge and their voices. The teachers in this study demonstrated this agency throughout their engagement with *Tabshoura*. They decided how and why they would engage with *Tabshoura* to create a classroom or school that would best serve their students. In my

supplemental model, each way the teachers in this study engaged with *Tabshoura* served a purpose for the participants to meet their goals. However they engaged with *Tabshoura*, they had the agency to address their goals through this localized OER.

In this study, the teachers' sense of confidence and community in *Tabshoura* facilitated their agency to make decisions for their classrooms and schools. In Chapter 6, I used the term "confidence" to label the teachers' explanations of their sense of the reliability of the platform, their expressed desire to use it, and the personal benefits they gained from using *Tabshoura*. All teachers in the study engaged with *Tabshoura* because it was a local resource that they said was appropriate for their students. For instance, four teachers compared *Tabshoura* to what other schools offered their own children, and they described *Tabshoura* as equal or even better than other materials. Furthermore, the teachers and administrator at School 5 also talked about how they were able to personalize their students' learning through *Tabshoura* to assist their "slow learners" progress despite their prolonged absences from school.

In Chapter 6, I also labeled the teachers' relationships as "community" because the teachers were not alone in navigating *Tabshoura* to best support the students. For instance, LAL staff and six teachers spoke positively about the relationships they have with each other. This partnership is how and why the teachers in this study started using *Tabshoura*. Four teachers also specifically mentioned how parents have thanked them now that they are more connected to their children's education through *Tabshoura*. Overall, the teachers in this study had supportive relationships with LAL who developed the platform and with the administrators, teachers, parents, and students who are also engaging with it. Teachers decided to use and continue to use *Tabshoura* because they had confidence in it as a means to their end, and they were more connected to the community through this platform.

In this case of LAL's *Tabshoura*, OER was not something that teachers had to change in order to empower them to reach their goals. Adams and Dannick (2022) argue that "taking knowledge (and knowledge resource) development as a process, creation is not the only stage at which a variety of voices can be integrated" (p.32). The local Lebanese teachers' knowledge was integrated into *Tabshoura* from the beginning since teachers worked with LAL staff to create the platform. A LAL staff member who is also a teacher using *Tabshoura* in her classroom explained the intended purpose of the platform:

Because we usually are very overwhelmed with all the classes, all the teaching classes. We need something that is ready made and as well as aligned with the Lebanese curriculum, so that we can just use them in our classes.

This staff member stated what she needed as a teacher: reliable resources that could be used as written for her purposes. She explained to me that LAL provided what she needed with *Tabshoura* because she could simply use the localized platform that was aligned to the Lebanese curriculum.

With this relevant platform, the teachers in this study described to me how they could evolve and adapt their approaches to teaching in response to the need for more consistent access to relevant and engaging education. For instance, four of the teachers interviewed explained how *Tabshoura* helped sustain education during the COVID-19 pandemic, and then they said the evolving economic and refugee crises required them to adapt their use of *Tabshoura* to meet the current demands. As Adam (2020a) said, "knowledge should not only be relevant to the place and the people but should also evolve over time with them" (p.5). Teachers' engagement with *Tabshoura* evolved as they supported students' needs outside the classroom and used learner-centered pedagogies to address individual learning gaps.

Overall, the model I am proposing to supplement Arinto et al.'s (2017) social inclusion model contributes to how and why teachers engage with previously localized OER. This inclusion of teachers supported how they used OER to serve their purposes within their classrooms and schools.

7.2 What's Next for "Open"?

As Nayla, the CEO of LAL, said, "We don't settle for the bare minimum, nor do we rely on ready-made solutions. We aim for tailored learning experiences developed by local for locals—more couture than prêt-à-porter." Nayla calls *Tabshoura* "couture" because it facilitates customized learning experiences instead of predetermined and standardized education.

Tabshoura being open is not only about access to resources, but instead, it is about access to possibilities. Recognizing the role openness played for the teachers in this study shifts the focus from the characteristics of resources and technology to the teachers themselves, for they define what the possibilities are. Without them, there are no OER--just more resources and technology.

Through this case study, I showed how centering the teachers and their role with OER helped to further define "open" as inclusive and participatory at the classroom and school level. The participants in this study navigated their circumstances through engaging localized OER that they trusted and were supported to use as they needed. They demonstrated the possibilities of OER. Adam (2020b) and Bali (2022) have described the individual as "embedded" and "entangled," respectively, with openness. By recognizing and valuing the individual's reasons and decisions for engaging with OER, the more open education practitioners can understand and support possibilities for OER as a facilitator of access to quality education. LAL and the Lebanese teachers in this study provided an example of how OER can be used as a tool to support students who have had to deal with instability and inconsistent access to education. They

also provided an example of how to support the inclusion of local participants in determining the use of OER as a tool for their purposes. LAL demonstrated how to include teachers throughout the different phases of the development of *Tabshoura*, and the teachers discussed how the inclusion of local participants meant their communities also participated in shaping the purpose of the OER. The local participants helped define how *Tabshoura* was “open” and how the platform as OER would serve them and their community.

More examples of local use of OER across the world, especially in the Global South, are needed to better understand their possibilities. “We cannot analyze OER in a vacuum, and we cannot continue to think about, create, and use OER without social justice in mind.” (Hollich, 2022, p. 14). This study showcases understudied circumstances, and it shows new ways of using OER and understanding how a localized resource as open supports the goals of LAL and the teachers. This case shows how important it is to widen who participates in defining and directing the use of OER, as Hollich (2022) also argues:

Fully enabling communities to make their own choices in this way means focusing on access and participation as well as empowerment... It means that we may not get the results that we expect and that our definitions of open need to be expansive and inclusive enough to make room for hegemonies beyond those of North American and European societies, even if it results in definitions, cultural resources, and OER materials that we ourselves do not fully value or understand. (p.17)

This study is not an argument for a “right” way to define engagement with OER, but instead, it is to nuance and acknowledge the spectrum of users’ understandings of engaging with localized OER. *Tabshoura* is a specific case of OER use and does not replace other ways of understanding OER. Consistent with Arinto et al.’s (2017) argument, this case highlights the need for more voices from knowledge holders, especially those in the Global South, to be included, valued, and appreciated in the production of OER at all levels of engagement. In addition, this case shows the value of going beyond inclusion as Arinto et al. (2017) described it and incorporating an

understanding of how teachers take up resources in their own schools and classrooms. As the teachers in this study who used *Tabshoura* showed, the platform is a means to one's goals. Focusing on more individual uses and understandings of OER will further the possibilities for learning that OER can facilitate. Furthermore, additional studies of LAL the organization and individual uses of *Tabshoura* would be beneficial because this study focused on a small subset of users of *Tabshoura*. More teachers from different types of schools and regions will have unique ways of engaging with *Tabshoura*, which will continue to grow LAL staff's understanding of its platform and of OER. Arinto et al. (2017) argued that "it is in the realms of individual and community participation and empowerment that future OER interventions hold their greatest promise and will yield their largest gains" (p. 589). With this focus on the individual classroom and school engagements with OER, additional research from the program level would also help with understanding power dynamics of knowledge production in OER. For instance, as LAL staff pilot *LALmoudaress*, the platform for teachers to share their lesson plans with one another, there will be an opportunity to study teachers engaging with localized OER in Lebanon by creating resources other teachers can use.

LAL created *Tabshoura* with and for teachers to bridge the learning gaps for students who have been forced out of school during an economic and refugee crisis in Lebanon. The teachers in this study have explained and demonstrated how they have engaged with *Tabshoura* to facilitate the support their students need to continue learning in and out of the classroom. The teachers have what I have labeled as confidence in the platform and a deeper sense of community support to meet their goals. This case study shows how *Tabshoura*'s openness facilitated teacher agency at the classroom and school level. LAL and the Lebanese teachers in this study provide a

unique opportunity to understand how engaging with a localized OER benefited teaching and learning at the classroom and school level.

Appendices

Appendix A: Extended Case Study Summary

Study	Method	Context	Goals and content	Population	Roles of local actors	Features of open (Olivier and Rambow, 2023)	Social Inclusion (Arinto et al., 2017)
Jimes, Weis, and Keep (2013)	Case Study: Interviews	KwaZulu-Natal province of South Africa	South African initiative, Siyavula: co-created math and science open textbooks with local experts in consideration of socioeconomic constraints	Underresourced South African high schools: 3 high school math and science teachers' experience with Siyavula	-Teachers printed open access textbooks -Teachers submitted changes and corrections to publishers -Local experts, including university faculty, co-created textbooks	-Accessible: Workshops and professional development for OER use; Tech was adaptable -Change/Modify: Format of OER was adaptable -Redistribute: Publishers edited OER for all based on requests (<i>program level</i>)	-Use: Accessibility and Awareness considered; up to teachers on use in classroom (<i>classroom/school level</i>) -Adapt: Teachers suggested content modifications
Butcher, Moore, and Hoosen (2014)	Project Report	Guyana	Increasing qualified teachers through teacher training aligned with UNESCO ICT Competency Framework for Teachers (CFT)	Pre- and in-service teachers for primary and secondary school	-Teachers provided feedback on inaccessibility of OER -College and university faculty provided feedback on selecting OER and editing OER -Ministry of Education selected OER for curriculum and adapted format (printed or stored OER on CDROM);	-Accessible: Facilitation guides to use OER; printed or digital OER -Change/Modify: development team made changes from feedback and with new materials available -Redistribute: Other countries using the OER (<i>program level</i>)	-Use: accessibility and awareness considered -Adapt: teachers participated through providing feedback

Study	Method	Context	Goals and content	Population	Roles of local actors	Features of open (Olivier and Rambow, 2023)	Social Inclusion (Arinto et al., 2017)
Abeywardena, Uys, and Fifita (2019)	Project Evaluation	Tonga	Mainstreaming OER: Accessible education through new Internet infrastructure for all 45 islands; Support students for higher education and employment opportunities	Tonga Institute of Higher Education (TIHE) and the Tonga Institute of Education (TIOE): tertiary educators	-Teachers co-designed OER, including instructional videos -Commonwealth of Learning (COL): led Strategic OER Implementation Project; trained and supported teachers -Ministry of Education and Training (MET) of Tonga: requested support of COL, an intergovernmental agency of open education; policy to support OER	-Accessible: Policy and capacity building efforts; built tech infrastructure -Change/Modify: Iterative course development -Redistribute: Courses developed were shared (<i>program level</i>)	-Use: Awareness and accessibility was considered -Create: teachers co-created OER and instructional videos; assisted with policy
Oates and Hashimi (2016)	Project Report	Afghanistan	Darakht-e Danesh (DD) Online Library: Accessible multilingual digital materials to contribute to teachers' subject knowledge and methodologies in classroom	Primary and secondary school teachers who are underresourced and un/underqualified	-Teachers access materials and contribute to translations, adapting lesson plans, editing content, and creating materials, including video lessons. - Canadian Women for Women in Afghanistan (CW4WAfghan) established platform and content and worked with teachers -Diaspora community translated and adapted materials	-Accessible: Tech literacy; Alternative access (mobile apps); Workshops and training for teachers -Change/Modify: Iterative course development -Redistribute: Courses developed were shared on DD library (<i>program level</i>)	-Use: Accessibility and Awareness was considered; up to teachers on use in classroom (<i>classroom/school level</i>) -Adapt: Teachers participated in translations; remix materials for lessons -Create: teachers made and added lessons

Study	Method	Context	Goals and content	Population	Roles of local actors	Features of open (Olivier and Rambow, 2023)	Social Inclusion (Arinto et al., 2017)
Pariyar, Kulathuramaiyer, and Bala (2021)	Case Study	Bario, Malaysia	Created “Community-led MOOC” as digital museum to develop new economic opportunities while maintaining culture of vulnerable populations in Southeast Asia	Single mother rural community	-Community members: centered their epistemologies and storytelling in MOOC -COMPETEN-SEA Project (funded by European Commission): supported Southeast Asia universities to develop educational programs for vulnerable populations. Here, capacity-building and training	-Accessible: Technology infrastructure; workshops and training -Change/Modify: Participants co-created the MOOC -Redistribute: content was added to MOOC for the purpose of sharing widely	-Access: Accessibility and awareness considered -Create: community members created MOOC that reflected their knowledge and way of knowing
Zagdragchaa and Trotter (2017)	Sequential exploratory mixed methods (interviews + surveys)	Mongolia	Improving quality of HEI after post-communist massification and privatization of higher education (no longer free education)	Faculty and administrators at public and private higher education institutions (HEIs) in Mongolia	Academic peers – HEI faculty and administrators: use and localize OER (often translations, summarizing, or reordering lessons) – Local OER activists (ONE): implement the National OER Program – International funders (DREAM IT): helped establish original OER program – Central government policymakers: promote and regulate OER with National OER Program	-Accessible: training and consultations -Modify/Change: localization of existing OER -Redistribute: Intended for teachers to re-share their adapted OER but not many teachers have participated (<i>program level</i>)	-Use: Awareness considered; up to teachers on use in classroom (<i>classroom/school level</i>) -Adapt: teachers translated, summarized, remixed lessons

Study	Method	Context	Goals and content	Population	Roles of local actors	Features of open (Olivier and Rambow, 2023)	Social Inclusion (Arinto et al., 2017)
Perryman, et al, 2014; Buckler et al. 2014	Reflexive Qualitative: Case Study with document analysis, interviews	Sub-Saharan Africa	Teacher Education through School-based Support in Sub-Saharan Africa (TESSA) Support un/under qualified teachers	Primary and secondary school teachers	Teachers: localized materials -Open University UK: trained teachers in technology and localization of materials -UK Government and philanthropic orgs.: funded project	-Accessible: trainings and workshops -Change/modify: Develop OER; localizations and translations of original OER -Redistribute: OER widely shared (<i>program level</i>)	-Use: Awareness and accessibility considered -Adapt: participated in localizations -Create: co-created OER
Wolfenden and Adinolfi, 2019; Perryman, Hemming and Buckler, 2014; Buckler et al. 2014	Reflexive Qualitative: Case Study with participant observations and interviews	India	Teacher Education through School-based Support (TESS-India): Localized teacher training materials to complement textbooks for primary language and literacy and primary and secondary math, science, and English. Support un/under qualified teachers when there is over 1.33 million deficit of teachers	Primary and secondary school teachers	-Teachers: Translated and localized content through supplementary materials and aligning materials with state requirements -Open University UK researchers: trained teachers and supported adaptation & translations - Funds from UK Gov's Department for International Development (DFiD) -Indian Government's National Knowledge Commission (NKC): support OER - Government of India's Ministry of Human Resource Development (MHRD): independent review panel of OER - TESS-India State Resource Group (SRG): teacher educators	-Accessible: trainings and workshops -Change/modify: Develop OER; localizations and translations of original OER -Redistribute: OER widely shared (<i>program level</i>)	-Use: Awareness and accessibility considered -Adapt: participants localized content -Create: co-created OER

Appendix B: Participants and Schools

	<i>School 1</i>	<i>School 2</i>	<i>School 3</i>	<i>School 4</i>	<i>School 5</i>
Photovoice					
<i>Teacher A</i>	X				
<i>Teacher B</i>	X				
<i>Teacher C</i>	X				
<i>Teacher D</i>	X				
<i>Teacher E</i>	X				
<i>Teacher F</i>	X				
<i>Teacher G</i>		X			
<i>Teacher H</i>			X		
<i>Teacher I</i>			X		
<i>Teacher J</i>			X		
<i>Teacher K</i>			X		
<i>Teacher L</i>				X	
Interviews					
<i>Teacher M</i>	X				
<i>Teacher N</i>	X				
<i>Teacher O</i>	X				
<i>Teacher P</i>	X				
<i>Teacher Q</i>	X				
<i>Teacher R</i>	X				
<i>Teacher S</i>	X				
<i>Teacher T</i>	X				
<i>Teacher U</i>					X
<i>Teacher V</i>					X
<i>Administrator A</i>					X

Appendix C: Photo and Caption Submission Form and Instructions

Think of this as a social media project. You are a teacher using *Tabshoura*, and you are posting on a site like Instagram about your experience with these resources.

Steps to Post:

1. Take a photo that you would post about the prompt.
2. Caption the photo with 1-2 sentences. Please use your preferred language.
3. Take a second, different photo that you would post about the same prompt.
4. Caption photo #2 with 1-2 sentences. Please use your preferred language.
5. Upload your photos and captions here: <https://bit.ly/42cavEo>
Or upload with the QR code below:



(The photos cannot be more than 10 MB each. They can be .png, .jpeg, .jpg, or .pdf files. You can use your mobile phone or any kind of camera.)

Prompts for the Post:

Here are the prompts. Take two pictures and captions for each prompt. Do one prompt at a time.

Take two photos of...

1. *What you do in the class with Tabshoura*
2. *How you have changed or modified Tabshoura to fit your classroom*
3. *What you like about using Tabshoura in your classroom*
4. *How your students feel about Tabshoura*

There will be an additional, optional prompt for you to add a photo and caption of anything else you would like to share about your experience with *Tabshoura*.

Example: Here are 3 responses from another photo documentation project I did with university students

Prompt: Think about where you take a break from studying. Take a photo of where you feel relaxed.

Response 1:



Caption: Museums are a place of relaxation for me. Here pictured is the Museum of African American Art in Detroit. I feel refreshed after museum visits, and I like going as quickly or as slowly as I want to. It's a way of self-care and carving out free time for myself.

Response 2:



Caption: I took this picture because he looked so peaceful sleeping. I also like the color yellow for a bed, it brightens the space a bit.

Response 3:



Caption: This is a photo of where I feel most relaxed—my living room! It's separate from school and is a place of refuge for me. I try to do minimal homework in this room to maintain no association with work here. I often am in this room with my fiancé or friends here which makes it relaxing as well.

Appendix D: Demographic Questionnaire

1. What is the name of your school(s)?
2. Select the description that best fits your school(s) (Select all that apply):
 - a. Private
 - b. Public
 - c. Double shifts
3. What grade(s) do you teach? (Select all that apply):

a. KG1	g. EB4
b. KG2	h. EB5
c. KG3	i. EB6
d. EB1	j. EB7
e. EB2	k. EB8
f. EB3	l. EB9
4. What subject(s) do you teach? (Select all that apply):
 - a. Mathematics
 - b. Earth and Life Sciences
 - c. Physics
 - d. Chemistry
 - e. English
 - f. French
 - g. Arabic
5. How often was your school closed last year?
 - a. 1-10 days
 - b. 10-20 days
 - c. More than 20 days
6. How long have you been teaching?
 - a. Less than 1 school year
 - b. 1 school year
 - c. 2-5 school years
 - d. More than 5 years
7. How long have you been using *Tabshoura*?
 - a. Less than 1 school year
 - b. 1 school year
 - c. More than 1 school year
8. What resources from *Tabshoura* have you used?
9. What resources on *Tabshoura* have you adapted, if any?
10. What resources on *Tabshoura* did you co-create, if any?

Appendix E: Photo and Caption Themes

What do you do with <i>Tabshoura</i> in the classroom?
Teachers use <i>Tabshoura</i> to complement other classroom activities.
Teachers use <i>Tabshoura</i> to support independent work.
Teachers use <i>Tabshoura</i> to create different learning dynamics .
Teachers use <i>Tabshoura</i> as a tool to support students in completing and retaining their lessons.
Teachers use <i>Tabshoura</i> to support different pedagogical approaches .
Teachers can use different technologies to have <i>Tabshoura</i> to complement the needs and goals of their class.
Teachers use <i>Tabshoura</i> to engage students.
How have you changed or modified <i>Tabshoura</i> to fit your classroom?
Teachers modify student arrangements to support their use of <i>Tabshoura</i> and their learning.
Teachers change location of learning by preparing students to continue using <i>Tabshoura</i> outside of school
Teachers change the classroom activities to support student engagement.
Teachers modify pace by using <i>Tabshoura</i> to allow students to practice until they comprehend the lessons.
Teachers modify the content through the use of other programs or simplification to support students
Teachers modify the technology used to convey content and support students
What do you like about using <i>Tabshoura</i> in your classroom?
Teachers like that they can set the foundation of the lesson through using <i>Tabshoura</i> first
Teachers like that students can work independently on <i>Tabshoura</i>
Teachers like that <i>Tabshoura</i> helps student complete and fully understand the lessons
Teachers like <i>Tabshoura</i> allows students to work in groups and in collaboration
Teachers like that <i>Tabshoura</i> instills competition among students
Teachers like that <i>Tabshoura</i> supports the development of students' soft skills
Teachers like that <i>Tabshoura</i> can be used with other activities to enhance learning
Teachers like that <i>Tabshoura</i> engages students
Teachers like that <i>Tabshoura</i> can be used with different technology
Teachers like that <i>Tabshoura</i> can be used outside the classroom .
How do your students feel about <i>Tabshoura</i>?
Students feel supported by the teacher when learning through <i>Tabshoura</i>
Students feel supported by features and activities on <i>Tabshoura</i>
Students feel joy, excitement, and overall positively about their learning experience on <i>Tabshoura</i> .
Students feel confident and are persistent in their use of <i>Tabshoura</i> .
Students feel capable of academic success through <i>Tabshoura</i>
Students and their families are interested in <i>Tabshoura</i>
Students feel independent when working with <i>Tabshoura</i>
Students feel collaborative and work interdependently with <i>Tabshoura</i>

Appendix F: Interview Codes

Content		
	Quality	
	Related to life	
	Relevant/Matches Curriculum/Complements	
Parents		
	Parental Approval	
		Parental Excitement
		Parental Engagement
	Support Parental Learning	
	Teacher/Parent Relationship	
	Technical Support for Parents	
Students		
	Digital Skills	
	Progress	
		Reward
	Soft Skills	
	Engaged	
		Independent
		Attentive
		Attractive
		Easy to use
		Excited/Joy
		Incentive
		Interactive/Game
Teacher		
	Assistant	
		Consistent
		Ease of Use
	Support Teaching	
	Teacher/Student Relationship	
		Excited
	Time	
		Creation
	Training	
		Ongoing Support

Technology		
	Anywhere/anytime (Accessibility)	
	Hardware	
	Innovation	
	Modern	
	Online	

LAL Positive	
	Comparison to “Regular” Schools
	Learning
LAL Issues	
	Availability of Tech
	Missing Subjects
	Username/Password

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