

Factors	Who	What	How
<b>Policy Factors</b>	Policymakers, school administrators, teacher educators, OER experts	<p>1) Raise awareness on OER so as to enable stakeholders to make informed decisions regarding how OER could be best implemented in this setting.</p> <p>2) Provide stakeholders with the pedagogical readiness that focuses on the fit between ICTs, OER and current teaching and learning practices to plan and support new practices.</p>	<p>1) Use bottom-up TPD approaches whenever possible (e.g., design thinking) to raise awareness on OER (see findings and discussion in paragraphs 1, 2 and 3 in section Knowledge Gained in <i>Chapter 5</i>).</p> <p>2) Promote and hold dialogue with policy makers, teacher educators and school administration in order to build up knowledge and capacity on OER. This dialogue should spell out the benefits afforded by OER use and the training and provisions necessary for OER adoption and implementation (see findings and discussion in paragraphs 4, 5 and 6 in section Digital Resources and findings in paragraphs 4 and 5 in section Social Resources in <i>Chapter 4</i>; findings in paragraph 2 in section Interest and Motivation in <i>Chapter 5</i> and findings and discussion in paragraph 1 in section Social Influence; and findings and discussion in paragraph 1 in section Facilitating Conditions in <i>Chapter 6</i>).</p>
	Policymakers, school administrators	3) Provide incentives or initiatives that stimulate the use of OER for learning and teaching and that help teachers to feel more	3) Provide unexpected rewards such as open badges to boost engagement and motivation or a TPD stipend to teachers who participate in the TPD program, if possible (see findings and discussion

		<p>professionally valued so that they are willing to embrace innovative practices.</p>	<p>in paragraphs 2, 3, 9 and 10 in section Social Resources in <i>Chapter 4</i>; and findings and discussion in paragraph 3, 5 and 6 in section Interest and Motivation in <i>Chapter 5</i>; and findings in paragraph 3 in section Support Obtained in <i>Chapter 5</i>).</p>
<p><b>Organizational Support Factors</b></p>	<p>Policymakers, school administrators, teacher educators, OER experts</p>	<p>1)Provide interested teachers with alternative options and locations for the TPD program besides the school. Providing alternative locations for TPD can mitigate lack of personnel issues.</p>	<p>1)TPD in OER could be provided in teacher education centers located in the municipality in the event that there are not enough facilitators or personnel to deliver TPD on school premises. This affords not only proximity of training but also enables interested teachers from different schools to disseminate and multiply these practices in their own schools (see findings in paragraphs 2 and 3 in section Social Resources in <i>Chapter 4</i>). This recommendation is also based on the fact that there is a teacher education center located in the municipality and that some teachers mentioned during the workshops that they had already attended some TPD programs there.</p>
	<p>School administrators</p>	<p>2)Provide teachers with access to external web sites such as YouTube, CC search, or OER repositories for TPD purposes on school premises.</p>	<p>2) “Schools that have a separate contract for Internet access which bypasses the official channels could request for this” (T. Amiel, personal communication, April 8, 2018) (see findings and discussion</p>

			in paragraph 6 in section Social Resources in <i>Chapter 4</i> ).
	<p>Policymakers, OER experts</p>	<p>3)The TPD curriculum for pre-service and in-service teachers could include a detailed specification with clear objectives and learning outcomes for how OER can be integrated into and across disciplines.</p>	<p>3)Show an example of this, how OER can be integrated in a Math or Science class, for instance, using existing repositories and OSS (see findings and discussion in paragraphs 7 and 8 in section Social Resources in <i>Chapter 4</i>).</p>
<p><b>Infrastructure Support Factors</b></p>	<p>Policymakers</p>	<p>1)Mitigate problems with Wi-Fi connectivity.</p>	<p>1) “Policymakers could think of mechanisms and support for schools in purchasing equipment, providing technical support, and help them in defining and creating local access policies” (T. Amiel, personal communication, April 8, 2018) (see findings and discussion in paragraphs 2 and 3 in section Support Obtained in <i>Chapter 5</i>).</p>
	<p>School administrators, teacher educators, OER experts</p>	<p>2)In the event that Wi-Fi access and connectivity is limited or unreliable, use other equipment, tools or materials to deliver the TPD program.</p>	<p>2a) Use multimedia equipment or classroom teaching equipment available on school premises such as: data projector, overhead projector and easels (see findings and discussion in paragraphs 1 and 2 in section Physical Resources in <i>Chapter 4</i>).</p> <p>2b) Use hard media containing tutorials on OER use and other offline resources (see findings and discussion in paragraphs 1 and 2 in section Physical Resources in <i>Chapter 4</i>).</p>

			<p>2c) Use Handouts, booklets, newspaper articles, academic articles, and LibreOffice Impress Presentation slides (see findings and discussion in paragraphs 1 and 2 in section Physical Resources in <i>Chapter 4</i>).</p>
<p>TPD Support Factors</p>	<p>OER experts, teacher educators *Ideally, one facilitator per school. In the event there are not enough facilitators then the TPD program can be delivered face-to-face in state or municipal teacher education centers or online.</p>	<p>1) Delivery mode of TPD program.</p>	<p>1) Provide teachers with face-to-face, practical, hands-on TPD by giving clear examples of existing OER and by providing step-by-step instructions on how to locate, use, adapt, remix and license locally contextualized OER using open licenses or Creative Commons license (see findings and discussion in paragraphs 2 and 3 in section Type of Effective TPD on OER for Teachers in <i>Chapter 5</i>).</p>
	<p>OER experts, teacher educators *One facilitator per school</p>	<p>2) Pedagogical aspects</p>	<p>2) Model effective practices for OER use and progressively incorporate into the TPD program tasks that are associated to teachers' professional practices and corresponding discipline or subject area taught. For example, begin by assigning teachers a task that involves searching for an image, text, audio or video OER that can be used to complement or supplement an activity or lesson in their discipline. For those teachers who are less proficient with technology, it is necessary for the</p>

			<p>facilitator to show teachers how to locate and download existing OER as offline resources. Then the facilitator can assign tasks that enable them to use and adapt offline resources according to the discipline they teach (see findings and discussion in paragraphs 2 and 3 in section Human Resources and findings and discussion in paragraph 4 in section Digital Resources in <i>Chapter 4</i>).</p>
	<p>OER experts, teacher educators *One facilitator per school</p>	<p>3) Pedagogical aspects and tools</p>	<p>3) Use tools present in the school system (i.e. multimedia equipment, classroom teaching equipment, hard media, printed material) in combination with mobile devices or online material whenever possible to engage teachers in the learning process (see findings and discussion in paragraph 1 in section on Physical Resources in <i>Chapter 4</i> and findings in paragraph 3 in section Support Obtained in <i>Chapter 5</i>).</p>
	<p>OER experts, teacher educators One facilitator per school</p>	<p>4) Pedagogical aspects</p>	<p>4) Develop teachers' digital capability and skills with the technology being used by demonstrating how this technology can be employed to improve instructional strategies and practices (see findings and discussion in paragraph 1 in section Human Resources in <i>Chapter 4</i> and findings and discussion in</p>

			paragraph 1 in section Interest and Motivation in <i>Chapter 5</i> ).
	OER experts, teacher educators One facilitator per school	5) Pedagogical aspects	5) Help teachers set up a Wiki to disseminate OER activities they have created to other public schools (see findings and discussion in paragraph 2 in section Effective Type of TPD in OER for Teachers in <i>Chapter 5</i> ).
	OER experts, teacher educators One facilitator per school	6) Pedagogical aspects	6) Provide ongoing facilitator support (e.g., provide instruction for a significant duration of time; support teachers during the implementation phase; provide active and collaborative learning opportunities for teachers) for scaffolding engagement and learning in order to progressively empower teachers to gain the autonomy and confidence required for learning about OER (see findings and discussion in paragraphs in 1, 2 and 3 in section Effective Type of TPD in OER in <i>Chapter 5</i> ).
	Buddy or expert teachers (computer teacher at the school or an agent of inclusion)	7) Provide ongoing help and support during the TPD program and after it has terminated.	7) Have teachers who did not take the TPD program watch or observe them in action (see findings and discussion in paragraph 4 and 5 in section Social Resources in <i>Chapter 4</i> and findings and discussion in paragraph 1 in section Facilitating Conditions in <i>Chapter 6</i> ).