

APPENDIX A

RUBRIC FOR ASSESSING TPACK FOR MEANINGFUL LEARNING WITH ICT

BY KOH (2013)

Dimension	0	1	2	3	4
Active	Students passively receive subject matter from media or ICT all the time	There is sporadic use of ICT tools by students to work with subject matter	Students are using ICT to work with subject matter half the time	There is substantial use of ICT by students to work with subject matter	Almost all lesson time involves students using ICT to work with subject matter.
Constructive	ICT tools used for transmission of subject matter rather than meaning-making	ICT tools used to support reproduction of subject matter or convergent knowledge expression by students	ICT used to support some degrees of divergent knowledge expression by students with respect to the subject matter	ICT tools used by students to synthesize information in order to construct verbal, written, visual, conceptual or product-oriented expressions of the subject matter.	ICT tools used by students to articulate their personal reflections of subject matter in the form of verbal, written, visual, conceptual or product-oriented expressions.
Authentic	No representations of real-world phenomenon or problems related to the subject matter are presented with ICT	ICT tools used to present examples of real-world phenomena related to the subject matter of students	ICT tools support students to investigate real-world phenomena or problems related to the subject matter	A problem associated with a real-world phenomenon related to the subject matter is used to anchor the activity and students investigate the real-world phenomenon with ICT tools in order to propose solutions.	Students represent their personal experiences of the real-world phenomenon/ problem related to the subject matter with ICT tools.
Intentional	Students do not use ICT tools to support them in	Students' learning gaps of the subject matter are	Students self-diagnose their learning gaps of the	Students use ICT tools/resources	Students continually use

	diagnosing, strategizing about or improving their learning gaps of the subject matter.	being diagnosed by teachers or peers.	subject matter by using ICT tools/resources.	to self-diagnose their learning gaps of the subject matter. Thereafter, they are to fix these learning gaps.	ICT-based tools/resources to self-diagnose and fix their learning gaps of the subject matter.
Cooperative	No cooperative activity over ICT platforms/tools or ICT tools/platforms are used to share information and resources related to the subject matter but no online discussion occurs.	Students work together either around the computer or through the computer in activities requiring convergent knowledge expressions of the subject matter	Students work together either around the computer or through the computer in activities requiring some degree of divergent knowledge expression of the subject matter.	Students work together either around the computer or through the computer in activities requiring a large degree of divergent knowledge expression of the subject matter.	Students work together either around the computer or through the computer in activities requiring primarily divergent knowledge expression of the subject matter.