WP1 – Final Item Selection for Digital Maturity, 12-18 years

DIMI citation:

Formula for creating an overall Digital Maturity Score:

1. Create an average score for each dimension
2. Multiply these average scores with their respective weights, then add these for the overall score:
   DM Score = AutonomyChoice_score*9.91 + AutonomyWithin_score*9.39 + Literacy_score*10.17 + Growth_score*10.43 + Risk_score*11.73 + EmoNeg_score*10.30 + EmoAgg_score*9.91 + Support_score*9.39 + Respect_score*10.30 + Citizenship_score*8.47

(SPSS Syntax appended to this document)

Autonomous Choice to Use Mobile Devices
Using mobile devices out of one's own choice rather than a feeling of obligation or compulsion.

*Please think about **how often the following things happen to you** while you are using a **mobile device** such as mobile phones, tablets, iPads, or laptop computers.*

"When using a mobile device..."

Never (1) – Rarely (2) – Sometimes (3) – Often (4) – Always (5)

Item	Variable name
… I am online because I feel like I have to be online all the time	autonomy_c1
… I am online because otherwise I feel like I am missing out on something	autonomy_c2

| … I have the feeling that it is controlling my life | autonomy_c3 |

α = .77, CR = .78, AVE = .55 (N=558)

Reverse coded items: autonomy_c1, autonomy_c2, Autonomy_c3

Autonomy Within Digital Contexts
Deliberately choosing and pursuing goals in digital contexts according to own interests and values.

*Please think about **how often the following things happen to you** while you are using a **mobile device** such as mobile phones, tablets, iPads, or laptop computers.*

"When using a mobile device..."

Never (1) – Rarely (2) – Sometimes (3) – Often (4) – Always (5)

Item	Variable name
… I choose the content I want to see	autonomy_w1
… I do the things that I like	autonomy_w2
… I decide what I do	autonomy_w3

α = .70, CR = .70, AVE = .44 (N=558)

Digital Literacy
The technical skills to use mobile devices and the internet in a safe and effective manner.

*Please tell us how true the following statements are of you when thinking about how you use the internet and mobile devices such as mobile phones, tablets, iPads, or laptop computers. Think about **how true this would be of you** if you had to do it now, on your own.*

Not at all true of me (1) – Not very true of me (2) – Neither true or untrue of me (3) – Mostly true of me (4) – Very true of me (5)

Item	Variable name
I know how to change the privacy settings (for example, deactivate cookies)	literacy_1
I know how to adjust the privacy settings of social media sites (for example, Instagram, Snapchat, TikTok)	literacy_2
I know how to store photos, documents or other files in the cloud (for example, Google Drive, iCloud)	literacy_3

α = .82, CR = .82, AVE = .61 (N=558)

Individual Growth in Digital Contexts
The ability to use mobile devices and digital contexts for personal learning and growth.

*Please think about **how often the following things happen to you** while you are using a **mobile device** such as mobile phones, tablets, iPads, or laptop computers.*

"When using a mobile device..."

Never (1) – Rarely (2) – Sometimes (3) – Often (4) – Always (5)

Item	Variable name
… I learn new things	growth_1
… I learn something useful	growth_2
… I learn new skills	growth_3

α = .81, CR = .81, AVE = .59 (N=558)

Digital Risk Awareness
Managing risks related to mobile devices and the online environment by being aware of potential dangers and influences.

*Please think about **how often the following things happen to you** while you are using a **mobile device** such as mobile phones, tablets, iPads, or laptop computers.*

"When using a mobile device..."

Never (1) – Rarely (2) – Sometimes (3) – Often (4) – Always (5)

Item	Variable name
… I am very careful	risk_1
… my own safety is very important to me	risk_2
… I make sure to be careful	risk_3

α = .85, CR = .85, AVE = .66 (N=558)

Support-Seeking Regarding Digital Problems
The ability to seek support from others when encountering problems regarding mobile devices or digital contexts.

*Please think about **how often the following things happen to you** while you are using a **mobile device** such as mobile phones, tablets, iPads, or laptop computers.*

"When using a mobile device..."

Never (1) – Rarely (2) – Sometimes (3) – Often (4) – Always (5)

Item	Variable name
… I ask others for help when I have a problem	support_1
… and I don't know what to do, I ask others for help	support_2
… and there is a technical problem, I ask others for help (for example, a friend, parent, sibling)	support_3
… and I have problems with others on the internet, I get help	support_4

$\alpha = .80$, CR = .81, AVE = .52 (N=558)

Regulation of Negative Emotions in Digital Contexts
The ability to control and effectively regulate negative emotions due to frustrations in digital contexts.

*Please think about **how often the following things happen to you** while you are using a **mobile device** such as mobile phones, tablets, iPads, or laptop computers.*

"When using a mobile device..."

Never (1) – Rarely (2) – Sometimes (3) – Often (4) – Always (5)

Item	Variable name
… and I become annoyed or upset online, it takes me a long time to feel better	emotion_n1
… and I become annoyed or upset online, I stay in a bad mood for a long time	emotion_n2
… and I become annoyed or upset online, there are only few things that can make me feel better	emotion_n3

$\alpha = .84$, CR = .85, AVE = .65 (N=558)

<u>*Reverse coded items:*</u> emotion_n1, emotion_n2, emotion_n3

Regulation of Impulses in Digital Contexts
The ability to control one's behaviour and inhibit emotional reactions due to frustrations in digital contexts.

*Please think about **how often the following things happen to you** while you are using a **mobile device** such as mobile phones, tablets, iPads, or laptop computers.*

"When using a mobile device..."

Never (1) – Rarely (2) – Sometimes (3) – Often (4) – Always (5)

Item	Variable name
… and somebody criticizes me online or in a text, I immediately react without considering the consequences	emotion_a1
… and a message makes me angry, I react too quickly and then later regret the way I responded	emotion_a2
… and somebody insults me, I try to get back at them	emotion_a3

$\alpha = .77$, CR = .78, AVE = .54 (N=558)

<u>*Reverse coded items:*</u> emotion_a1, emotion_a2, emotion_a3

Respect Towards Others in Digital Contexts
Acting respectfully when engaging with others and in content one shares online.

*Please think about **how often the following things happen to you** while you are using a **mobile device** such as mobile phones, tablets, iPads, or laptop computers.*

"When using a mobile device..."

Never (1) – Rarely (2) – Sometimes (3) – Often (4) – Always (5)

Item	Variable name
… I watch my language when I disagree with someone, so that what I say doesn't come across as mean	respect_1
… I care about the feelings of others	respect_2
… I make sure that pictures I post or send of other people will not insult them or get them into trouble	respect_3
… I respect the opinions and knowledge of others	respect_4

α = .83, CR = .83, AVE = .55 (N=558)

Digital Citizenship
Using mobile devices and digital contexts to contribute to society by showing active civic engagement for social, societal, and environmental causes.

*Please think about **how often the following things happen to you** while you are using a **mobile device** such as mobile phones, tablets, iPads, or laptop computers.*

"When using a mobile device..."

Never (1) – Rarely (2) – Sometimes (3) – Often (4) – Always (5)

Item	Variable name
… I use it to improve life in my neighborhood, town or world	citizenship_1
… I use the internet to support campaigns for issues like environmental protection or to spread awareness for climate change	citizenship_2
… I use it to stand up for things that really matter in the world	citizenship_3

α = .85, CR = .85, AVE = .66 (N=558)

SPSS Syntax for the Digital Maturity Score

#computing scale scores

```
COMPUTE
AutonomyChoice_score=MEAN.2(autonomy_c1r,autonomy_c2r,autonomy_c3r).
EXECUTE.

COMPUTE
AutonomyWithin_score=MEAN.2(autonomy_w1,autonomy_w2,autonomy_w3).
EXECUTE.
```

```
COMPUTE Literacy_score=MEAN.2(literacy_1,literacy_2,literacy_3).
EXECUTE.


COMPUTE Growth_score=MEAN.2(growth_1,growth_2,growth_3).
EXECUTE.


COMPUTE Risk_score=MEAN.2(risk_1,risk_2,risk_3).
EXECUTE.


COMPUTE EmoNeg_score=MEAN.2(emotion_n1r,emotion_n2r,emotion_n3r).
EXECUTE.


COMPUTE EmoAgg_score=MEAN.2(emotion_a1r,emotion_a2r,emotion_a3r).
EXECUTE.

COMPUTE Support_score=MEAN.3(support_1,support_2,support_3,support_4).
EXECUTE.


COMPUTE Respect_score=MEAN.3(respect_1,respect_2,respect_3,respect_4).
EXECUTE.


COMPUTE Citizenship_score=MEAN.2(citizenship_1,citizenship_2,citizenship_3).
EXECUTE.


#Creating weighted dimension scores using the mean scores of expert importance
rating (as seen in Rijsdijk et al., 2007).

COMPUTE Literacy_Pweighted=10.17 * Literacy_score.
EXECUTE.

COMPUTE Growth_Pweighted=10.43 * Growth_score .
EXECUTE.

COMPUTE AutonomyC_Pweighted=9.91 * AutonomyChoice_score.
EXECUTE.

COMPUTE AutonomyW_Pweighted=9.39 * AutonomyWithin_score.
EXECUTE.

COMPUTE EmotionN_Pweighted=10.30 * EmoNeg_score.
```

```
EXECUTE.

COMPUTE EmotionA_Pweighted=9.91 * EmoAgg_score.
EXECUTE.

COMPUTE Risk_Pweighted=11.73 * Risk_score.
EXECUTE.

COMPUTE Citizenship_Pweighted=8.47 * Citizenship_score.
EXECUTE.

COMPUTE Respect_Pweighted=10.30 * Respect_score.
EXECUTE.

COMPUTE Support_Pweighted=9.39 * Support_score.
EXECUTE.

#creating composite measure by adding the weighted dimension scores

COMPUTE DigMat_Pcomposite=(Literacy_Pweighted + Growth_Pweighted +
AutonomyC_Pweighted +
    AutonomyW_Pweighted + EmotionN_Pweighted + EmotionA_Pweighted +
Risk_Pweighted + Citizenship_Pweighted +
    Respect_Pweighted + Support_Pweighted).
EXECUTE.
```