Winning the war on state-sponsored propaganda
Gains in the ability to detect disinformation a year and a half after completing a Ukrainian news media literacy program

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Executive Summary

Background: Onslaught of disinformation in Ukraine confuses citizens and undermines democracy

Since late 2013, a sharp increase in disinformation and propaganda from the Kremlin has threatened to upend democratic progress and political stability in Ukraine. The Kremlin deployed the strategy of “hybrid warfare” messaging across Ukraine to stir up fear among residents and pave the way for illegal Russian annexation of the peninsula and the occupation of parts of Donetsk and Luhansk oblasts (provinces) (Appelbaum & Lucas, 2015). Since then, Ukrainians have lived in a propaganda-filled environment where half-truths and wholesale fabrications play on fears, confusion, national identities, and patriotic feelings. These tactics have “create(d) uncertainty, confusion, and ultimately a doubt whether any source can be trusted” (Nimmo, 2015).

The disinformation problem is exacerbated by structural weaknesses in Ukraine’s media sector. Major channels are owned by oligarchs and political elites with business ties in Russia. Most broadcast media skews reporting to protect economic and political interests, and employs a manipulative framing of disputes as “patriotic” versus “objective” reporting. Citizens struggle to form fact-based opinions amid a disorienting information deluge by the Kremlin, Ukraine’s political parties, and oligarch-controlled media that drown out independent and objective voices.

Against this backdrop, Ukrainians are becoming increasingly cynical and apathetic about the country’s future. While Ukrainians consume a high volume of news content,¹ barely one in four Ukrainians trust the media² and only 23% cross-check news sources—the most basic form of media literacy (Media Sapiens, 2017).³ This situation facilitates poor decisions, discourages civic engagement, dampens grassroots demand for transparent and accountable government, and reduces prospects for economic growth.

Piloting one potential solution: Enhancing citizen media literacy skills

In this context, IREX (International Research and Exchanges Board) designed and implemented Learn to Discern (L2D),⁴ a “demand-side” response to the problem of manipulative information, an essential companion to “supply-side” solutions such as supporting independent, ethical, and truthful journalism. Citizens must be able to separate fact from fiction, recognize manipulation and hate speech, and demand and seek out independent, fact-based journalism.

From October 2015 through March 2016, IREX implemented L2D with funding from the Canadian government and in partnerships with local organizations Academy of Ukrainian Press and StopFake. Through intensive skill-building seminars, L2D reached more than 15,000 people of all ages and professional backgrounds. Remarkably, L2D also reached more than 90,000 people indirectly: direct participants shared what they learned with family, co-workers, and peers. Accompanying public service announcements and billboard messages alerting Ukrainian citizens to the danger of fake news reached an estimated 2.5 million people.

¹ 73% of population watch TV news every day: program baseline survey. Media Sapiens Kremlin Influence Index 2017 found that despite a low level of trust in Russian media, its influence on public opinion is quite high.
² 26% trust the media, according to the Learn to Discern project KIIS December 2016 survey.
³ Learn to Discern project end line survey.
⁴ The project originally was called Citizen Media Literacy and later renamed to Learn to Discern.
The impact: Citizens better able to detect disinformation 1.5 years later

In 2017, IREX evaluated the long-term impact of the L2D training by assessing news media literacy skills using a stratified random sample of L2D participants and comparing the results to a control group matched for gender, age, region and education level. The impact evaluation used an online survey instrument that required respondents to analyze real and fake news stories to examine retention of skills and knowledge over time, as well as self-report their media consumption habits to assess the level to which they seek out quality sources of information.

The results of the impact evaluation showed that L2D participants had statistically significant higher levels of disinformation news analysis skills, greater knowledge of the news media environment, a stronger sense of agency over the media sources they consume, and were more likely to consult a wider range of news sources. Compared to the control group, L2D participants were:

- 28% more likely to demonstrate sophisticated knowledge of the news media industry
- 25% more likely to self-report checking multiple news sources
- 13% more likely to correctly identify and critically analyze a fake news story
- 4% more likely to express a sense of agency over what news sources they can access

These effects persisted even one and a half years after they completed the program. This demonstrates that L2D is an especially effective approach given that prior studies have shown the effects of other media literacy programs wane after one year (Weber, 2012).

The findings of the L2D impact study make a unique contribution to the media and information literacy research literature. In particular, the development of a task that required the analysis of news stories allowed L2D participants to demonstrate whether they had better news analysis skills than a control group matched for education, age, gender, and geographic region.
Introduction

An emerging threat to the professional standards-based news media is the rise of fake news and disinformation campaigns to destabilize democracies (Zakem, 2017). In recent years, Ukraine has seen an increase in disinformation and propaganda used to disturb democratic progress since the 2014 Ukrainian revolution. Half-truths and alternative facts from Kremlin-funded media sow fear and confusion about news events, creating “uncertainty, confusion, and ultimately a doubt whether any source can be trusted without personal experience” (Nimmo, 2015, p.5).

To address this issue, IREX (International Research and Exchanges Board), an international development non-governmental organization, backed by funding from the Canadian government and the support of prominent Ukrainian organizations, developed a media literacy training course called Learn to Discern (L2D) and trained more than 15,000 Ukrainians over nine months to think more critically about how they consume media in order to question misleading news (IREX, Learn to Discern, 2016). Through skills-based workshops focused on changing news media consumption behavior, 361 citizen trainers from across the country, representing a broad range of age groups, educational, and occupational backgrounds, delivered the L2D training face-to-face to people they were connected to in their workplaces and communities. This program delivery approach was based on the principle that trust is an important factor in learning. By choosing trainers who were influential in their social and professional networks, training participants were more likely to trust what they learned about propaganda and disinformation than they would information from a stranger.

In contrast to more traditional media literacy courses, the L2D training specifically focused on teaching citizens to identify markers of manipulation and disinformation in the news media. The curriculum intended to foster critical thinking skills, teaching participants not only how to select and process news, but to also discern what not to consume. The training was adapted by citizen trainers to the needs and interests of their workplace or community networks and was reported by participants to last between several hours up to more than eight hours. The majority of participants reported receiving about a half day of training total. An exit survey of participants verified that all of the topics in the curriculum were covered. Results from the L2D program evaluation showed that participants reported gaining a deeper appreciation of and greater skills in what is needed to consume news wisely. The percentage of participants who reported cross-checking the news was 82% of those surveyed after the training, in contrast to 60% of those surveyed at the beginning of the training. In addition, ratings of confidence in analyzing the truthfulness of media content and for distinguishing true from false news were 30% higher for end-of-training survey respondents compared to pre-training survey respondents. A large majority (80-90%) of participants surveyed a month after the training reported using the news media literacy behaviors taught in the training: cross-checking news, looking for facts, and checking the source.

In 2017, IREX sought to evaluate the long-term impacts of the L2D training by assessing news media literacy skills and knowledge in a stratified random sample of L2D participants and comparing the results to those for a control group matched for gender, age, region and education levels. The goal of the impact evaluation was to assess the extent to which L2D participants were able to demonstrate the skills and knowledge targeted by the L2D curriculum and whether their ability to demonstrate these skills and knowledge was better than a comparison group matched on gender, education, age, and geographic region who had not taken the training.

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5 Academy of Ukrainian Press and StopFake, a project of the Media Reform Group.
6 We hypothesize that the face-to-face social network delivery model used by L2D leads to enhanced uptake and impact; however, no research has been done comparing results for this model compared to other delivery approaches.
7 However, this may not be an accurate report of actual training time. Training duration data was not available from trainers. The half day estimate was reported by L2D impact study participants a year and a half after the end of the training.
8 The program evaluation methodology did not link individuals’ beginning and end of training scores, nor ensure that the same group of participants were surveyed at each time point. However, about 76% of L2D training participants completed both surveys. Thus, a comparison of the group means across timepoints is a proxy for the individual pre-to post change in the population of 15,030 L2D participants.
Literature Review

In addition to closely reviewing the L2D curriculum, we conducted a literature review of media literacy and news media literacy conceptual frameworks and assessments to inform the development of a news media literacy assessment for L2D.

Media literacy

Media literacy has been increasingly incorporated into K-12 curriculums in the United States in the past two decades. Hobbs and Frost (2003) conducted a randomized control experiment to measure critical media analysis skills in a media literacy curriculum embedded in a yearlong 11th grade English media and communications course and compared results with a demographically similar control group. The researchers administered a media literacy assessment at the start and end of the year with the treatment and control groups. The assessment included questions addressing the following components of media literacy skill:

Table 1. Components of Media Literacy Skill (Hobbs and Frost, 2003)

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction techniques</td>
<td>Ability to recognize and describe how media messages are constructed</td>
</tr>
<tr>
<td>Point of view</td>
<td>Ability to identify point of view in a media message</td>
</tr>
<tr>
<td>Omissions</td>
<td>Ability to recognize information that was omitted in an informational message</td>
</tr>
<tr>
<td>Compare and contrast</td>
<td>Ability to compare and contrast messages from different types of news programs, e.g., local and national news</td>
</tr>
<tr>
<td>Purpose</td>
<td>Ability to identify the purpose of a media message</td>
</tr>
<tr>
<td>Target audience</td>
<td>Ability to identify the intended audience of a media message</td>
</tr>
</tbody>
</table>

The researchers found that the students who received the media literacy curriculum showed statistically significant greater gains in their ability to identify construction techniques, point of view, omitted information, comparison-contrast, and message purpose. The researchers concluded that the students who received the media literacy instruction were more likely to “recognize the complex blurring of information, entertainment and economics that are present in contemporary nonfiction media” (Hobbs & Frost, 2003, p. 351).
News media literacy

News media is a sub-area of media literacy focused on using existing examples of journalism to teach actionable skepticism in the form of journalistic verification skills (Fleming, 2014). This includes skills for analyzing news articles as well as knowledge of “media knowledge structures.” People with knowledge of how the news media industry is structured and operates “are much more aware during the information-processing tasks and are, therefore, more able to make better decisions about seeking out information, working with that information, and constructing meaning from it that will be useful to serve their own goals” (Potter, 2004, p. 69). Maksl et al. (2015) developed a news media literacy scale with three subscales (see Table 2) and examined relationships among scores on each subscale in a sample of 500 teenagers ages 14 to 17 living in a large metropolitan area. They found that scores on the three subscales could be used to differentiate between a highly news literate group and a less news literate group. Highly news literate teens were more motivated to consume news, more skeptical of news media, and more knowledgeable about current events, although they did not consume more news media than their less news media literate peers. In a subsequent study to better understand outcomes from a news media literacy course, Maksl et al. (2017) found that students who had taken the course showed increases in news media literacy scores, motivation for news consumption, and knowledge about current events compared to a control group that did not take the course.9

Table 2. Components of News Media Literacy Skill (Maksl et al., 2015)

<table>
<thead>
<tr>
<th>Media Knowledge Structures</th>
<th>Understanding of knowledge structures related to the news media industry (e.g., ownership of media outlets, who has the most influence of what gets aired on local TV news)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need for Cognition</td>
<td>Preference for mindful versus automatic thought-processing of news10 (e.g., prefer complex to simple problems, thinking in depth about something)</td>
</tr>
<tr>
<td>Media Locus of Control</td>
<td>Degree of perceived control of whether and how one is influenced by media11 (e.g., can avoid being misinformed by paying attention to different sources of news)</td>
</tr>
</tbody>
</table>

Additional research at the Center of News Literacy at Stony Brook University sought to identify tasks that could be used to measure the extent to which students who have taken a news literacy course are better able to differentiate between higher quality and lower quality news content compared to a control group. The tasks used for the assessment included differentiating between a reliable and less-reliable source, whether a story includes or excludes links that would allow the respondent to fact check, and whether a source has a vested interest in an event being reported (Weber, 2012). In most of the tasks, the news literacy students were better able to deconstruct the stories, but in some cases, were comparable to the control group. The researchers found that in general, the differences between the news literacy students and the control group waned after one year.

9 The following assessments were administered: Need for Cognition Scale; Media Locus of Control; News Media Knowledge; Intrinsic Motivation for News consumption; News Media Skepticism; News Media Use; and Current Events Knowledge.
10 Adapted from the Need for Cognition scale developed by Epstein et al., 1996.
11 Adapted from a scale measuring the extent to which an individual feels they are in control of their own health (Wallston & Strudler Wallston, 1978).
Review of the Learn to Discern curriculum

While many topics covered in the L2D curriculum were similar to those found in the news literacy literature, the L2D program tackled issues that were specific to the news media environment in Ukraine, going beyond deconstructing how the media creates messages to being able to recognize deliberate efforts to manipulate people and public opinion through misleading headlines and emotionally manipulative content. The program team was careful to consider neutrality of sources and to not endorse any type of media outlets to mitigate against any anti-Russian or anti-Western bias. The L2D curriculum taught individuals to discern disinformation tactics, more fully understand the news media environment, use specific questions to reflect on whether a news item meets the basic journalism standards of quality, and understand markers of manipulation and disinformation in the media, including emotional manipulation tactics. For example, the curriculum included an exercise that asked participants to identify audience, purposes, techniques used to attract attention or solicit an emotional response, and what type of information was presented and omitted. The curriculum also covered types of propaganda, types of media, media owners in Ukraine, and the concepts of trust, credibility, objectivity and media ownerships and their potential effects on what news is presented.

The curriculum consists of three chapters. The first chapter provides participants with a basic understanding of information and propaganda. It gives an overview of the types of mass media, their work, objectivity, and media ownership. The second chapter covers manipulation, fake news, and propaganda and their dangers. Through practical exercises, participants gain experience analyzing media content (headlines, texts, pictures, and videos) using debunking tools and identifying markers of fakes, manipulation, and propaganda. The third chapter explores the consequences of dehumanization, stereotypes, and hate speech in the media. All material is written in a simple, easy-to-understand way and contains numerous examples, exercises, and handouts that help participants not only to learn, but also to share the information with friends and relatives.
Method

Research questions

The primary research question for the impact study was: Do L2D participants have better news media literacy knowledge and skills than the general population a year and a half after the end of the program? Additional research questions included the extent to which L2D participants retained the skills and behaviors they had been taught through the training, how different components of news media literacy are related to one another, and what factors may play a role in news media literacy.

Participants

A total 412 individuals completed the survey.12 A disproportionate stratified random sampling method13 was used to ensure that each sample represented the full range of education levels, gender, age, and geographic regions in the L2D participant population.14 Gender, age, and education levels were generally similar across both groups. The control group had more respondents with a vocational education and fewer with higher education compared with the L2D sample.

Table 3. Demographic breakdowns of L2D and control group respondents

<table>
<thead>
<tr>
<th></th>
<th>L2D (n=207)</th>
<th>Control (n=205)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>50%</td>
<td>48%</td>
</tr>
<tr>
<td>Male</td>
<td>50%</td>
<td>52%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-30</td>
<td>40%</td>
<td>38%</td>
</tr>
<tr>
<td>31-55</td>
<td>42%</td>
<td>42%</td>
</tr>
<tr>
<td>56+</td>
<td>18%</td>
<td>20%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocational</td>
<td>17%</td>
<td>26%</td>
</tr>
<tr>
<td>Secondary</td>
<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td>Higher education</td>
<td>70%</td>
<td>62%</td>
</tr>
<tr>
<td>Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>East</td>
<td>22%</td>
<td>25%</td>
</tr>
<tr>
<td>Central</td>
<td>42%</td>
<td>41%</td>
</tr>
<tr>
<td>South</td>
<td>36%</td>
<td>34%</td>
</tr>
</tbody>
</table>

12 A sample size of 200 was targeted for each group to achieve the desired statistical power.
13 With disproportionate stratification, the sample size of each stratum does not have to be proportionate to the population size of the stratum. This was done so that smaller population subgroups were adequately represented in the sample.
14 The L2D participant population represented the Ukrainian population across these demographic factors but had higher percentages of university-educated, female, and 31 to 55-year-old individuals compared to the general population. The sampling process was aimed at balancing the number of individuals in each demographic subgroup in order to ensure adequate representation in the final samples.
Method

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Survey instrument

The survey instrument assessed five areas: objective news analysis skill; disinformation news analysis skills; news media knowledge, media locus of control; and self-rating of awareness of disinformation, news media analysis skills, news media consumption behavior, trust, and value of objective news. L2D participants were also asked to rate their level of their skills, confidence, and news media consumption behavior before the training, as well as whether they had transferred the information from the L2D training to friends, relatives, or colleagues.

Table 4. Areas covered by L2D impact study survey instrument

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic data</td>
<td>Gender, age, oblast, education, occupation</td>
</tr>
<tr>
<td>Objective news media assessment</td>
<td>Analysis of an objective news story</td>
</tr>
<tr>
<td>Disinformation news media</td>
<td>Analysis of a news story based on false and manipulative information.</td>
</tr>
<tr>
<td>assessment</td>
<td></td>
</tr>
<tr>
<td>News media knowledge assessment</td>
<td>Knowledge of media structures and ownership</td>
</tr>
<tr>
<td>Media locus of control</td>
<td>Sense of control over the influence of media</td>
</tr>
<tr>
<td>assessment</td>
<td></td>
</tr>
<tr>
<td>Self-rating questions</td>
<td>Awareness of disinformation, news media analysis skills, news media</td>
</tr>
<tr>
<td></td>
<td>consumption behavior, trust, and value of objective news.</td>
</tr>
<tr>
<td></td>
<td>L2D participants: self-rating of skills, confidence, and news media</td>
</tr>
<tr>
<td></td>
<td>consumption behavior before the training; transfer of information to others</td>
</tr>
</tbody>
</table>

The news media analysis assessments were based on the media literacy skill components identified in the research literature (Hobbs & Frost, 2003; Weber, 2012). The objective story was about a shooting at the Ukraine-Russia border, and the disinformation story was about educational reforms in Ukrainian schools that would remove minority languages in schools (such as Russian). The news media knowledge assessment was adapted from the instrument developed by Maksl et al. (2015) to assess knowledge of media outlet ownership, the way in which the content of the news is produced, and awareness of possible effects of ownership and content production on how news is reported. The media locus of control assessment examined the respondent’s sense of control over how they are influenced and informed by the news (Maksl et al., 2015). The assessment instrument was piloted with 33 L2D participants and non-participants to evaluate clarity, length, and interest.
Results

L2D participants outperformed the control group on three out of four news media literacy assessment areas

To address the research question about whether L2D participants had better news media literacy skills than a matched group of non-participants, we conducted a multiple regression analysis to compare scores in each assessment area, taking into account gender, age, geographic region, and education. The results showed that the L2D participants scored statistically significantly higher for disinformation news analysis skill, knowledge of the media environment, and media locus of control, but not for objective news analysis skill. Table 2 lists the relative size of the difference between the average score for each group.

Table 5. Average scores for news media literacy assessment areas

<table>
<thead>
<tr>
<th>Group</th>
<th>Objective News Analysis</th>
<th>Disinformation News Analysis</th>
<th>News Media Knowledge</th>
<th>Media Locus of Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>% difference¹⁷</td>
<td>6%</td>
<td>13%</td>
<td>28%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Compared to the control group, L2D participants had better disinformation news media analysis skills and more knowledge of the news media environment compared to the general population a year and a half after the end of the training. L2D participants also had a slightly greater sense of control over how they are influenced by the media as measured by media locus of control. Figure 1 illustrates the relative gap between L2D participants and the control group in each area.

Figure 1. Comparison of L2D and control groups on each assessment area

Both groups scored lower for the objective news analysis than the other assessment areas, suggesting that detecting

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¹⁵ Scores for each of the four assessments were calculated based on adding up the points for each “correct” (i.e., news media literate) answer to the questions in each section and standardized to a 100-point scale.

¹⁶ All scores are standardized to a 100-point scale and can be interpreted as the percent correct on the assessment.

¹⁷ Percent difference between the control and L2D groups was calculated by dividing the difference between the means for each group by the lower group mean.
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18 The disinformation news story followed the objective news story on the survey, so lower scores on the analysis of the objective story cannot be attributed to an influence of being more critical on the disinformation story. Scores on the objective news analysis assessment ranged from 0 to 85% in both groups, and from 0 to 100% for the disinformation news analysis assessment.

19 Another consideration was that the topic of the objective news story (a shooting on the Ukraine-Russia border) may have been especially sensitive due to the ongoing war in eastern Ukraine, causing both groups to be more hesitant in evaluating it for truthfulness.

20 All three differences were statistically significant.

markers of objective news may be more difficult than detecting manipulation and disinformation, and that analysis of objective news was not emphasized as much in the training. The fact that this was the only area for which there was not a statistically significant difference between L2D participants and the control group when education level, geographic region, age, and gender are taken into account, suggests that skill for analyzing objective news needs to be developed on its own and that it likely needs to be coordinated with the skill for analyzing disinformation-based news. This is consistent with human development theory that shows skills that are developed in one context do not automatically transfer to new contexts, and when they are, must be coordinated with one another (Mascolo & Fischer, 2010).

The control group had lower knowledge of the news media environment compared to their ability to analyze the disinformation news story, whereas the L2D group had similar average scores in both areas. The fact that, even taking education level and other demographic factors into account, the control group had better scores on the disinformation news analysis assessment than on the objective news analysis assessment suggests there are additional factors that support the ability to detect misinformation. However, L2D training appears to result in stronger disinformation analysis skills, even a year and a half later.

The fact that both L2D participants and the control group scored above 70% on the media locus of control assessment suggests a fairly high sense of control in the adult population in Ukraine. However, L2D participants rated themselves higher in three specific areas on the assessment:

▸ When I am misinformed by the news media, I can do something about it
▸ If I pay attention to multiple sources of information, I can avoid being misinformed
▸ If I take the right actions, I can stay informed

These three items specifically addressed taking practical action to gain a greater sense of control over influence from the news media. The focus of the L2D curriculum was on providing the tools to discern objective news from false or manipulative news. This seems to translate into gains in a sense of control from putting those tools into action—which persists even a year and a half after the training.

In summary, L2D participants had better disinformation news media analysis skills and more knowledge of the news media environment compared to the general population a year and a half after the end of the training. L2D participants also had a slightly greater sense of control over how they are influenced by the media as measured by media locus of control. Both groups scored lower for the objective news analysis than the other assessment areas, suggesting that skill for analyzing objective news needs to be developed on its own and that it likely needs to be coordinated with the skill for analyzing disinformation-based news. Both groups had high scores on average on the media locus of control assessment, but L2D participants rated themselves higher in three areas related to taking practical action to gain a greater sense of control over influence from the news media.
**Results**

**L2D participants were more likely to cross-check other sources, rate their skills higher in distinguishing true information from false, and were more confident in their ability to analyze the truthfulness of media content compared to the control group**

The survey asked respondents to rate their current skills and confidence in analyzing news media content, and to report their behavior in terms of cross-checking news through other sources. L2D participants were also asked to rate their skills, confidence, and behavior prior to the training.

On average, L2D participants were 37% more confident in analyzing the truthfulness of media than the control group, and 38% more likely to cross-check news in other sources. They also rated their skills in distinguishing true news from false news 30% higher than the control group.

![Comparison of self-ratings of news media skills, confidence, and behavior](image)

Figure 2. Comparison of self-ratings of news media skills, confidence, and behavior

Because there was no way to compare self-ratings in these areas to the ratings L2D participants gave themselves at the beginning of the training, we asked them to retrospectively rate their pre-training skills, confidence, and behavior. L2D participants were 61% more confident in their ability to analyze the truthfulness of media a year and a half after the training compared to before the training, 38% more likely to cross-check news in other sources, and rated their skills in distinguishing true news from false news 21% higher.

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21 Responses to each rating question were standardized to a percentage scale, with 100% representing the highest score possible. The third and fourth questions were yes/no questions so the percentage scale represents the likelihood of a yes response.

22 The control group was not asked to retrospectively rate their skills because they did not have a reference point to compare them to a year and half earlier.
L2D participants retained the behavior of cross-checking news a year and a half after completing the training

The impact study results found that 82% of L2D participants reported cross-checking the news, the same percentage found by the 2016 program evaluation for this behavior at the end of the training (see Table X below). Results from the 2016 L2D program evaluation had found that 60% of those surveyed at the beginning of the training. However only 32% of the L2D impact study group reported retrospectively that they cross-checked the news prior to the training. Retrospective pre-tests are often more valid self-assessments because participants are more familiar with a concept or procedure (e.g., the concept of “cross-checking”) after they have taken the training (Gorrall et al., 2016). Thus, we hypothesize that the retrospective pre-test level of 32% who cross-checked the news before the training may be a more valid estimate of pre-L2D behavior. When retrospectively rating their ability to take the right actions to stay informed, they may rate themselves lower. The fact that 72% of the control group in the impact study reported that they cross-check the news is likely to be an overestimate due to their lack of familiarity with the procedure for cross-checking.

Table 6. Comparisons of self-reported cross-checking news behavior

<table>
<thead>
<tr>
<th></th>
<th>2016 program evaluation</th>
<th>2017 Impact study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-test</td>
<td>Post-test</td>
</tr>
<tr>
<td>Do you cross-check the news?</td>
<td>60%</td>
<td>82%</td>
</tr>
</tbody>
</table>

Gains for L2D participants are greater when compared to retrospective pre-training ratings than compared to control group ratings

As described for cross-checking news above, the impact of the L2D training appears to be greater when the L2D ratings at the time of the year and a half follow-up are compared to retrospective ratings of pre-training skills instead of the control group.

Table 7. Comparison of gains in self-reported news media analysis skill

<table>
<thead>
<tr>
<th></th>
<th>Comparison of L2D group 1.5-year followup vs. control group</th>
<th>Comparison of L2D group 1.5-year followup vs. retrospective pre-training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to analyze the truthfulness of media content</td>
<td>+37%</td>
<td>+61%</td>
</tr>
<tr>
<td>Confidence in skills for distinguishing true/false news</td>
<td>+21%</td>
<td>+30%</td>
</tr>
</tbody>
</table>

However, it is possible that the validity gains in using retrospective pre-test scores may have been offset by the fact that participants were asked to rate their skills a year and a half after the training.
L2D participants rated their current skills 61% higher than their retrospective ratings for the ability to analyze the truthfulness of media content and 30% higher than their retrospective ratings of their confidence in their skills for distinguishing true news from false news. The analysis found that L2D participants’ pre-training self-ratings and the control group’s self-ratings were similar in for these two areas as well as for cross-checking news, as shown above. This supports the hypothesis that individuals rate themselves higher in these news media skill areas prior to being trained than they do afterward. Thus, the differences between L2D participants and the control group on skill self-rating questions likely underestimates the actual difference between the two groups.

**L2D participants retained high levels of news media skills and behaviors after one and a half years**

The impact study survey asked L2D participants to rate their news media literacy skills and behaviors before the training and at the time of the one and a half year follow-up survey; however, it did not ask them to rate themselves after the training. In order to estimate the post-training levels, we used the 2016 L2D program evaluation one-month follow-up survey results.24 25

Skills and behaviors remained steady or decreased only slightly after one and a half years. Cross-checking news had the lowest levels prior to the training but improved immensely as a result of the training, and then remained steady as of the one and a half year follow-up survey. Confidence in analyzing the truthfulness of media content started at a moderate level (54%), increased to 75% (a rating of “confident”) after the training, and were about the same (74%) after a year and a half. Similarly, self-rated skill in distinguishing true from false news also started at 76%, increased to 70% after the training and decreased to 70% after a year and a half (less than 10%). In contrast to other long-term follow-up of media literacy skills in the research literature (e.g., Weber, 2012), it does not appear that the skills acquired during the L2D training have waned after a year.27

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24 The L2D impact study sample was selected to be representative of the L2D participant population, which means the reverse is true so the post-training results were used as an estimate of the average post-training scores for the individuals in the L2D impact study sample.

25 Scores for self-rated confidence and knowledge/skills were standardized to a 100-point scale where 50% is neutral, 80% is confident/high, and 100% is very confident/high.

26 Retrospective pre-training scores are shown instead of those assessed prior to the training. Responses to each rating question were standardized to a percentage scale, with 100% representing the highest score possible. The news checking question was a yes/no question so the percentage scale represents the likelihood of a yes response.

27 This finding is based on an estimate of the post-training ratings using responses from over 11,000 L2D participants. While the samples are similar, future evaluation of L2D trainees should build in a longitudinal follow-up design to better assess patterns of change over time.
Results

Winning the war on state-sponsored propaganda: Gains in the ability to detect disinformation a year and a half after completing a Ukrainian news media literacy program

Despite differences in news media skills and behaviors, L2D and control group respondents appeared to be similar in their levels of trust in the media (less than 50%), reading/watching the news (80-85%), and the importance of TV ownership (60-65%). However, slightly more of the L2D participants who watch the news said they trust at least one news source. They were even similar in their awareness of paid-for materials presented as though they were news (12% higher for L2D participants but this was not statistically significant) and in the importance of this issue (65-70%).

Figure 4. Similarities between L2D participants and control group on general media-related survey questions

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28 For the L2D group, of the 80% who watch the news, 55% trust at least one news source while 45% did not. For the Control group, of the 86% who watch the news, 50% trust at least one news source while 50% did not.

29 The U-Media national survey on media consumption in Ukraine found a similar level of awareness of sponsored material, reporting that 55% of the population was aware about sponsored material in the media in 2017 (Internews, 2017).

30 Responses were standardized to a percentage scale, with higher percentages representing either higher ratings or a higher likelihood of a yes response.
The two groups also appeared to be similar in the extent to which they value, seek out, and are able to recognize quality journalism. However, L2D participants had consistent and statistically significant higher self-ratings in all three of these areas.

![Figure 5. Comparison of L2D and control group on valuing, seeking, and recognizing quality journalism.](image)

**Figure 5.** Comparison of L2D and control group on valuing, seeking, and recognizing quality journalism. Responses were standardized to a percentage scale, with higher percentages representing higher ratings on a five-point rating scale.

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31 Responses were standardized to a percentage scale, with higher percentages representing higher ratings on a five-point rating scale.
Winning the war on state-sponsored propaganda: Gains in the ability to detect disinformation a year and a half after completing a Ukrainian news media literacy program

Results

News media knowledge may mediate the relationship between media locus of control and disinformation analysis skill

In order to address the question of whether all of the news media literacy areas appear to be strongly related to one another, we examined the pattern of correlation for the four components of news media literacy in the L2D participant group and the control group (Table 8).

Table 8. Strength of relationships among components of news media literacy

<table>
<thead>
<tr>
<th></th>
<th>Objective news analysis</th>
<th>Disinformation news analysis</th>
<th>News media knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disinformation news analysis</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>News media knowledge</td>
<td>None</td>
<td>Strong L2D &gt; control³³</td>
<td></td>
</tr>
<tr>
<td>Media locus of control</td>
<td>None</td>
<td>Low³⁴</td>
<td>Moderate L2D &gt; control³⁵</td>
</tr>
</tbody>
</table>

Scores on the objective news analysis assessment were not related to any of the other assessment areas in either group. In other words, those who scored higher on the objective news analysis did not tend to score higher on the disinformation news analysis, the news media knowledge assessment, or media locus of control assessment. The strongest relationship in both groups was between disinformation news analysis and news media knowledge; those with higher scores on one tended to have higher scores on the other. This tracks with the finding that understanding news media knowledge and preference for mindful vs. automatic thinking are both characteristics of high news literate individuals (Maksl, 2015). The strongest relationship with media locus of control was with news media knowledge and not with disinformation news analysis skill. We hypothesize that news media knowledge—understanding who owns media outlets and how ownership may influence news content production—may mediate the relationship between media locus of control and disinformation analysis skill. By gaining knowledge about the structures through which news is generated, the necessity for disinformation news analysis skills becomes clear. At the same time, a sense of control over choices about media consumption might be enhanced by a greater understanding of the structures through which news is generated.

３２ The same pattern of correlation was recently found in an IREX 2018 evaluation of a training of Ukrainian school administrators and teachers.
３３ Disinformation news analysis vs. News media knowledge correlation: L2D participants r=.55, control group r=.50.
３４ Disinformation news analysis vs. Media locus of control: L2D participants r=.18; control r=.17.
３５ News media knowledge vs. Media locus of control: L2D participants r=.36, control group r=.30.
Higher education is the strongest predictor of all areas of news media literacy except media locus of control

Educational background was strongly related to respondents’ objective news analysis skill, disinformation news analysis skill, and news media knowledge but not media locus of control. Surprisingly, media locus of control scores were similar across the three education subgroups. Respondents with higher levels of education tended to have higher scores on the disinformation news analysis and news media knowledge, which may be related to having had more opportunities to develop critical thinking skills. The reverse was true for the objective news analysis: higher levels of education were related to lower scores. Critical thinking may be related to skepticism, causing higher-educated, more critical thinking individuals to be skeptical of objective news (particularly when asked to analyze it) (Garrison, 1992).

![Figure 6. Average media literacy scores by education group](image-url)
Age was related strongly to scores on the objective news analysis as well as the disinformation news analysis. However, it was the youngest age group that had the highest scores on the objective news analysis (they were low relative to that group’s disinformation analysis scores). That trend reversed itself for the disinformation news analysis assessment: the older age groups—particularly 31-55—tended to score higher than the youngest age group. The 31-55 age group was more likely to have a higher education background, while the 18-30 age group was more likely to have a secondary education or less. Those with a vocational education were balanced across age groups. Age was not related to either news media knowledge or media locus of control.

Region was also related to news media literacy, with higher scores on the disinformation news analysis and news media knowledge for those from the Central region. Respondents from the Eastern region had the next highest news media knowledge while those from the Southern region had the second highest disinformation news analysis scores on average. Like age and education, region was also not related to media locus of control.
Finally, the only area for which gender was a factor was news media knowledge. Male respondents tended to have somewhat higher scores compared to females. There were no significant differences for any of the other news media areas.

Figure 9. Average media literacy scores by gender
Discussion

Objective vs. disinformation news analysis skills

L2D participants clearly outscored non-participants on analysis of the news story that was based on disinformation. Although we had hypothesized that individuals who participated in the Learn to Discern training would be better than the non-participant in analyzing both objective and disinformation news media stories, there was not a statistically significant difference between the L2D and control groups on the objective news media assessment; however, there was a slight trend toward lower scores for the L2D group. Despite the neutral headline and language used in the article, the story topic was of an emotional nature and could have led to L2D participants to be more skeptical of its objectivity. The study by Maksl et al. (2015) found that more news literate teens were more skeptical of news media than those in the low news media literacy group. Thus, the lack of a difference between the L2D and control groups on the objective news media assessment could be interpreted as a natural consequence of greater skepticism by those who are more news media literate. This may be the result of the fact that the L2D training emphasized deconstructing deliberately manipulative news stories rather than discerning the markers of more objective news reporting. Only one set of findings (Hobbs & Frost, 2003) compared scores on objective news and found that the experimental group scored higher than the control group; no other studies have asked participants to distinguish between objective news and disinformation.

Retention of news media knowledge and behaviors

In contrast to other follow-up of media literacy skills in the research literature (e.g., Weber, 2012), the skills acquired during the L2D training were retained after a year and a half. A large majority (82%) of L2D participants retained the behavior of cross-checking news a year and a half after completing the training, and only slight declines were found for skill in distinguishing true from false news and confidence in analyzing the truthfulness of media content. This could be due to the delivery of the training through social networks, which have the potential to reinforce news media literacy skills and behaviors (Sucala, 2018). The L2D curriculum had a number of differences from other types of news media training in that it focused on changes in behavior, not just gaining knowledge and skills. In addition, the L2D training was focused on news media literacy and was context-specific, addressing media consumption habits and targeting specific media and information issues in Ukraine at the time of the training. Finally, it was designed to raise healthy skepticism in those who were not currently the audience of fact-checked news and information. By ensuring that participants felt the need to acquire news-checking and other news literacy skills, the training appears to have led to greater retention. A large majority (90%) of L2D participants surveyed after the training reported sharing information from the training with other people, which is equivalent to an average of six people per trainee. Research on learning shows that teaching others supports learning (Okita, 2012), suggesting that explaining information from the L2D training with others might have supported the retention of knowledge, skills, and behavior.

Relationships among news media literacy competencies

We had expected to find that higher scores on news media system knowledge would be positively correlated with higher scores on both the objective and disinformation news media assessments. The strongest relationship in both

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36 This finding is based on an estimate of the post-training ratings using responses from over 11,000 L2D participants. While the samples are similar, future evaluation of L2D trainees should build in a longitudinal follow-up design to better assess patterns of change over time.

37 By training instructors who then engaged their networks in their workplaces and community, it is possible that participants were able to reinforce the learning from the training after it ended. However, this is speculative given the lack of information about whether participants shared news literacy-related experiences with one another.
groups was between disinformation news analysis and news media knowledge; those with higher scores on one tended to have higher scores on the other. This tracks with the finding that news media knowledge and more mindful thinking are both characteristics of high news literate individuals (Maksl, 2015). We hypothesize that news media knowledge—understanding who owns media outlets and how ownership may influence news content production—may mediate the relationship between media locus of control and disinformation analysis skill. By gaining knowledge about the structures through which news is generated, the necessity for disinformation news analysis skills becomes clear. At the same time, a sense of control over choices about media consumption might be enhanced by a greater understanding of the structures through which news is generated. Additional research is needed to explore this change process and to understand it as a developmental progression of skills and understanding.

The role of media locus of control

We hypothesized that by gaining skills about how to analyze news media and knowledge about how disinformation and manipulation works, L2D participants would have also developed confidence in their skills and understanding and therefore feel more in control of how the media influences them. Media locus of control was slightly higher overall for the L2D group, as well as positively correlated with disinformation news media analysis, news media system knowledge scores, and news cross-checking behavior. In particular, L2D participants rated themselves higher in the three areas of media locus of control that related to taking practical action to gain a greater sense of control over influence from the news media. This finding is consistent with those of Maksl et al. (2017) whose results showed that media locus of control scores for news media literacy program participants were higher despite the lack of an explicit focus on this topic during training. The L2D training focused on behavior change and taught participants how to recognize markers of disinformation and fact-check news stories. Thus, it is not surprising that L2D participants had higher scores than the control group on the media locus of control items related to “doing something about it” when misinformed by the news and paying attention to multiple sources of information to avoid being misinformed. It may be that without news media literacy training, people feel a false sense of control over how they are influenced by the media. This could explain why there were not larger differences between L2D participants and the control group.

Trust vs. skepticism

Developing skills to discern disinformation tactics, knowledge of types of propaganda, types of media, media owners in Ukraine, and awareness of the potential effects of media ownership on what news is presented may have increased participants’ skepticism of news media in general, even as it gave them greater confidence in their own ability to distinguish true news from false news. Additional measures related to trust and healthy skepticism may be needed to explore the relationships among trust, media literacy, and media locus of control.
Implications for Practitioners and Funders

The findings of the L2D impact study make a unique contribution to the news media literacy research literature. The development of a task that required the analysis of news stories allowed L2D participants to demonstrate whether they had better news analysis skills than a control group matched for education, age, gender, and geographic region. The demonstration of better disinformation news analysis skill corroborates the results showing that 82% of L2D participants report that they continue to cross-check the news they consume and are confident in their skills for distinguishing true news from false news.

In addition to demonstrating that L2D participants have better news media literacy skills after one and a half years than those who did not receive the training, the results also provide evidence that L2D participants know more about how the news media system works. Most importantly, news media knowledge likely interacts with their news media literacy skills to enable them to more critically engage with news media messages and disinformation.

A study by Reuters on the problem of low trust in media shows that bias, spin and hidden agenda are some of the main reasons for lack of trust (Newman & Fletcher, 2017). We believe that trust plays an important factor in perceptions of bias, evaluating news media messages, and discerning propaganda and disinformation. Research questions related to skepticism and trust should be explored more thoroughly in future research to determine how they interact with news media literacy skills.

The L2D curriculum focuses on behavior change in addition to knowledge and skills and is focused on news literacy. It is context-specific and adaptable to the media and information issues in a particular country. In addition, it addresses emotional manipulation as an important component of disinformation and provides techniques to address this and was designed to raise healthy skepticism in those who do not currently fact-check news and information. Training trainers who engage their networks is another important component of L2D’s approach. Disinformation and propaganda often target and try to escalate social divisions. By allowing media literacy skills to be spread within existing trust structures, not only are skills more easily scaled but they may be more effectively learned and practiced. Future research and practice would benefit from understanding how news literacy development is supported by trust and familiarity.

The delivery of training through social networks also has the potential to reinforce news media literacy skills and behaviors. The fact that 90% of L2D participants surveyed after the training reported sharing what they learned with an average of six people per trainee suggests that explaining information from news media training to others may support retention of knowledge, skills, and behavior as well as the importance of trust-based dissemination through social networks.

Disinformation and fake news rely on provoking immediate emotional responses to tensions in society to cloud critical thinking. Debunking fake news takes time to identify sources and assess whether information is fake; once proven, the negative effects of spreading fake news, including stoking tensions and spreading hate speech, may already have had an impact. It is likely that writing or sharing news stories that do not conform with journalistic standards or ethics on social media will not stop anytime soon with rapid technological advances. It is important to democratic society that individuals rely first on media literacy skills when consuming news so that believing and sharing fake news is prevented.

The impact study findings begin to support a theory of change for the development of news media skills and knowledge. When adults learn how to analyze news media and gain knowledge about how disinformation and manipulation work,
they gain confidence in their skills and understanding and therefore feel more in control of how they are influenced by media. Furthermore, gaining skills and knowledge leads to increased skepticism of news media in general, even as it results in greater confidence in the ability to distinguish true news from false news. Greater skepticism and yet greater confidence may temporarily lead to over-application of media analysis skills but it is likely that this can be corrected over time with additional learning and support. Finally, media locus of control may be more accurately measured through retrospective assessment because of lack of awareness of what it takes to critically consume media.
Limitations

The sampling process was aimed at recruiting an L2D and control group sample as similar as possible other than participation in L2D training. As in any sampling process, additional individual differences related to news media literacy or any related factors cannot be fully captured and accounted for. These differences could create distortions in the data that affect the results in some way.

In order to keep the survey to a manageable length, we chose not to ask participants to retrospectively self-rate their skill levels following the training. This affected our ability to create a longitudinal dataset to assess the retention of skills over time. However, in drawing an L2D sample representative of the trainee population, the post-training averages for the population were a suitable estimate for the longitudinal analysis of skill retention.

L2D program records did not allow the duration of the training for each participant to be included in the analysis as a control variable. Given that the citizen trainers engaged their social networks and were not monitored, some may have spent different amounts of time on the training overall or on different parts of it. However, if some participants did not receive the full training, their assessment scores would be weaker than those who did. This limitation would not call the overall findings into question, though it could have weakened the magnitude of the program effects.
References


## Annex 1

### L2D impact study outreach and response rates

#### Contacts with L2D training participants:

<table>
<thead>
<tr>
<th>DISPOSITION</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Total calls (including calls-reminders)</td>
<td>3434</td>
</tr>
<tr>
<td>B agreed to fill the online questionnaire</td>
<td>982</td>
</tr>
<tr>
<td>C refused to fill the online questionnaire</td>
<td>196</td>
</tr>
<tr>
<td>did not recall participating in training</td>
<td>172</td>
</tr>
<tr>
<td>Emails sent (including emails-reminders)</td>
<td>2839</td>
</tr>
<tr>
<td>ACTUALLY FILLED OUT THE QUESTIONNAIRE</td>
<td>207</td>
</tr>
<tr>
<td>Response rate (actual/agreed to do survey)</td>
<td>21%</td>
</tr>
</tbody>
</table>

#### Contacts with control group:

<table>
<thead>
<tr>
<th>DISPOSITION</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Total calls (including calls-reminders)</td>
<td>5675</td>
</tr>
<tr>
<td>B agreed to fill the online questionnaire</td>
<td>879</td>
</tr>
<tr>
<td>C refused to fill the online questionnaire</td>
<td>1322</td>
</tr>
<tr>
<td>Emails sent (including emails-reminders)</td>
<td>1358</td>
</tr>
<tr>
<td>ACTUALLY FILLED OUT THE QUESTIONNAIRE</td>
<td>205</td>
</tr>
<tr>
<td>Response rate (actual/agreed to do survey)</td>
<td>23%</td>
</tr>
</tbody>
</table>
Annex 2

L2D impact evaluation survey

We invite you to participate in the survey devoted to knowledge of media and attitudes towards it. It takes 25-30 minutes to fill out the questionnaire. Please complete the survey on your own, do not consult with other people. Please be sincere when answering the questions. All answers are anonymous and will be analyzed in aggregated form. Please fill in the survey by 11 October.

Please fill in survey in one session – do not close tab/ browser until you click “Submit” button.

Thank you.

Section 1: Demographic information

D1. Email Address __________________

D2. Gender
   ▸ Woman
   ▸ Man

D3. Your age
   ▸ Under 18
   ▸ 18-30
   ▸ 31-55
   ▸ 56+

D4. In what oblast do you live most time during the past 2 years?
   ▸ Dnipropetrovsk
   ▸ Donetsk
   ▸ Zaporizhzhia
   ▸ Kirovograd
   ▸ Kyiv
   ▸ Luhansk
   ▸ Mykolaiv
   ▸ Odessa
   ▸ Poltava
   ▸ Sumy
   ▸ Kharkiv
   ▸ Kherson
   ▸ Cherkasy
   ▸ Chernihiv
   ▸ Other
Annexes

Winning the war on state-sponsored propaganda: Gains in the ability to detect disinformation a year and a half after completing a Ukrainian news media literacy program

D5. Education
- Secondary or lower
- Secondary vocational (technical school, college)
- Higher

D6. Occupation
- Specialist (work that requires higher education)
- Non-manual employee (doesn't require higher education)
- Manual employee
- Entrepreneur, self-employed
- Student
- Unemployed
- Serviceman, police
- Pension
- Other (specify) __________________________________________
Section 2: Media analysis

Please answer a set of questions for two articles. Please answer what you feel, without looking for additional information in web. Please be attentive when reading the articles and questions.
1. Who is the intended audience for this story? [Open-ended question]

Adult population of Ukraine who are closely following the news

2. The wording of the message suggests certain conclusions *

- Yes
- No
- Don’t know

3. What kind of emotion does this message evoke? [Select all that apply. ] *

- Positive
- Neutral
- Negative
- Don’t know

4. What is the purpose of this article? [Select one response]

- To inform about what happened
- To convince and influence readers
- I do not know

5. Does the article miss any sides/points of view??


- Speaker of Russian State Border Service
- No

7. The message uses terms that are easy to understand. [Select one response]

- Yes
- No
- Don’t know

8. The title of the article appeals to emotions. [Select one response]

- Yes
- No
- Don’t know

9. The reporter… [Select one response]

shows bias in what he/she says.

- His/her position is neutral
- Don’t know
10. The article is balanced in terms of opinions, references, and sources. [Select one response]
   ▶ Yes
   ▶ No
   ▶ Don’t know

11. Are facts separated from opinion? [Select one response]
   ▶ Yes
   ▶ No
   ▶ Don’t know

12. How credible are the statements made by Oleg Slobodyan, the individual cited in the story? [Select one response]
   1-10 scale where 1 - Not credible at all, and 10 - Extremely credible

13. The article has an explicit news hook. [Select one response]
   ▶ Yes
   ▶ No
   ▶ Maybe
   ▶ Don’t know

14. The statements in this article were supported by facts. [Select one response]
   ▶ Yes
   ▶ No

15. Rate the following statement: “this is an objective story.” (In this definition, objective means “balanced, unbiased”). [Select one response]
   • Strongly disagree
   • Disagree
   • Neither agree nor disagree
   • Agree
   • Strongly agree

16. Considering your answers above, how would you rate the story? [Select one response]
   1- It is not credible
   10 - It is credible
Реформа образования и зачистка языков нацменьшинств

Тема: Реформа образования: необратимые последствия (153)

Украинизация стала сюрпризом реформы образования. Отныне предметы на языках нацменьшинств будут вестись лишь в начальной школе и то до 2020 года. В Украине и мире забили тревогу: это нарушает права нацменьшинств, которые составляют треть населения страны.

Соня Тарасюк, РИА Новости Украина

Скандалная реформа

Тотальная украинизация стала главный сюрпризом реформы образования, которая, похоже, рискует усилить противостояние не только внутри общества, но и между Украиной и другими странами.

Как известно, во вторник, 5 сентября, в Украине таки стартовала долгожданная реформа образования. В первый пленарный день новой сессии депутаты приняли во втором чтении закон "Об образовании" (№3491-Д).

Однако документ сразу же вызвал немало противоречий. В частности, зерном разрыва стала 7 норма закона о том, что с 1 сентября 2018 года в Украине преподавание на языке национальных меньшинств, к которым относится и русский, будет разрешено только для учеников младшей школы.
Winning the war on state-sponsored propaganda: Gains in the ability to detect disinformation a year and a half after completing a Ukrainian news media literacy program

IREX
1. Who is the intended audience for this story? [Open-ended question]

- Russian-speaking population in Ukraine and abroad, ethnic minorities in Ukraine

2. The wording of the message suggests certain conclusions *

- Yes
- No
- Don’t know

3. What kind of emotion does this message evoke? Select all that apply.

- Positive
- Neutral
- Negative
- Don’t know
4. What is the purpose of this article? [Select one response]
   - To inform about what happened
   - To convince and influence readers
   - I do not know

5. The goal of the message is to impose opinions or rouse the viewer to action. [Select one response]
   - Yes
   - No
   - Don’t know

6. Did the article miss any points of view?
   - Yes
   - No
   - Don’t know

7. What points of view may be missing? [Open-ended question]
   - Ukrainian officials or direct sources from Ministry of Education

8. All names of officials, data and quotes/opinions have clear references. [Select one response]
   - Yes
   - No
   - Don’t know

9. The style, images, statistics, and symbols correspond to the content of the message. [Select one response]
   - Yes
   - No
   - Don’t know

10. The title of the article... [Select one response]
    - is neutral
    - provokes an emotional response
    - Don’t know

11. The title of the article... [Select one response]
    - Corresponds to the content of the article
    - Doesn’t correspond to the content of the article
<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. The reporter shows bias in what he/she says.</td>
<td>▸ shows bias in what he/she says.</td>
</tr>
<tr>
<td></td>
<td>▸ His/her position is neutral</td>
</tr>
<tr>
<td></td>
<td>▸ Don’t know</td>
</tr>
<tr>
<td>13. Are facts separated from opinion? [Select one response]</td>
<td>▸ Yes</td>
</tr>
<tr>
<td></td>
<td>▸ No</td>
</tr>
<tr>
<td></td>
<td>▸ Don’t Know</td>
</tr>
<tr>
<td>14. The article is balanced in terms of opinions, references and sources. [Select one response]</td>
<td>▸ Yes</td>
</tr>
<tr>
<td></td>
<td>▸ No</td>
</tr>
<tr>
<td></td>
<td>▸ Don’t know</td>
</tr>
<tr>
<td>15. How credible are the statements made by the experts cited in the article? [Select one response]</td>
<td>1-10 Scale, where 1 - Not credible at all, and 10 - Extremely credible</td>
</tr>
<tr>
<td>16. The article has an explicit news hook. [Select one response]</td>
<td>▸ Yes</td>
</tr>
<tr>
<td></td>
<td>▸ No</td>
</tr>
<tr>
<td></td>
<td>▸ Maybe</td>
</tr>
<tr>
<td></td>
<td>▸ Don’t know</td>
</tr>
<tr>
<td>17. Multiple political figures are mentioned. [Select one response]</td>
<td>▸ Yes</td>
</tr>
<tr>
<td></td>
<td>▸ No</td>
</tr>
<tr>
<td></td>
<td>▸ Maybe</td>
</tr>
<tr>
<td></td>
<td>▸ Don’t know</td>
</tr>
<tr>
<td>18. It focuses on achievements/activities of one person. [Select one response]</td>
<td>▸ Yes</td>
</tr>
<tr>
<td></td>
<td>▸ No</td>
</tr>
<tr>
<td></td>
<td>▸ Don’t know</td>
</tr>
<tr>
<td>19. The statements in this article were supported by facts. [Select one response]</td>
<td>▸ Yes</td>
</tr>
<tr>
<td></td>
<td>▸ No</td>
</tr>
<tr>
<td></td>
<td>▸ Do not know</td>
</tr>
</tbody>
</table>
20. Rate the following statement: “this is an objective story.” (In this definition, objective means “balanced, unbiased”). [Select one response]

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

21. Considering your answers above, how would you rate the story?
[Select one response]

1 - It is not credible, 10 - It is credible

Section 3: News media knowledge

1. Most media outlets in the Ukraine are * One answer
[Institutions that produce news – media ownership]

- owned by oligarchs +1
- owned by the government
- businesses
- independent
- do not know

2. To which private owner do the following channels belong to? One answer in each row
[Institutions that produce news – media ownership]

<table>
<thead>
<tr>
<th>R.Akhmetov</th>
<th>I.Kolomoyskiy</th>
<th>V.Pinchuk</th>
<th>P.Poroshenko</th>
<th>D.Firtash</th>
<th>Do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1+1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5th channel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>STB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kanal Ukrayina</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Please select all characteristics that propaganda has as opposed to news and/or information. [Select all that apply]

[Propaganda vs. news – L2D curriculum]

▸ Presents partial, incomplete information +1
▸ Appeals to emotions +1
▸ Appeals to well-known facts
▸ Purpose is to communicate
▸ Purpose is to impose +1
▸ Provides knowledge
▸ Has objectivity
▸ Influences opinions +1
▸ Purpose is to inform and explain but not to offer solutions
▸ Purpose is to inform and explain but also to convince +1
▸ All from above
▸ Do not know

4. When it comes to reporting the news, the main difference between a website like Ukaynska Pravda and a website like Ukr.net is that

[How news content is produced – news outlet vs. aggregator]

▸ Uk.net does not have reporters who gather information, while Ukrayinska Pravda does +1
▸ Ukr.net focuses on national news, while Ukrayinska Pravda focuses on local news
▸ Ukrayinska Pravda has more editors than ukr.net does
▸ Do not know

5. Who has THE MOST influence on what gets aired on the national TV news? One answer

[How news content is produced – influence of ownership]

▸ Individual reporters
▸ The anchor, the person reading the news
▸ The cameraman
▸ The owner +1
▸ The editor
▸ Do not know
6. In the news journalistic standards are violated if... Select all that apply

[Journalistic standards – L2D curriculum]
- The expert’s opinion is presented as an explanation of the situation from the stance of one party +1
- The expert’s opinion is used as a point of commentary or an assessment of the further development of the event at hand.
- There is no answer to the question: Where? +1
- There is no answer to the question: When? +1
- There is no answer to the question: Who is protagonist of the story?
- Generalized reference to opinions +1
- Do not know

7. “The control by the state, organizations, or other groups of people over the public expression of information, thoughts, or creativity.” This is the definition of which concept? [Select one response]

[Censorship definition – L2D curriculum]
- Advertisement
- Manipulation
- Propaganda
- Censorship +1
- Self-censorship
- Dzhynsa
- Fake News
- None
- Do not know

8. “Paid or sponsored reporting. The material with no explicit news hook.” Definition of what is it? [Select one response]

[Advertorial definition –L2D curriculum]
- Advertisement
- Manipulation
- Propaganda
- Censorship
- Self-censorship
- Dzhynsa +1
- Fake News
- None
- Do not know
9. What of the following can be used as markers of fakes on TV? 
Select all that apply

[Characteristics of manipulation in news –L2D curriculum]
- Incredible and stunning situations referred to in the stories +1
- Dramatization by journalists (use of emotional vocabulary) +1
- There are names of organizations, cities and persons that you did not know before +1
- Journalist put his/ her opinion in the story +1
- Journalist leads (with questions or tone, for example) interviewees and other key individuals in the story to certain judgments +1
- Video/ picture is not commented by reporter
- Inconsistency of the video/ picture with reporter’s words +1
- Trusted TV channels don’t produce fake news
- It is impossible to identify fake news
- If story is aired during regular news hours then it is true
- It is a breaking story
- Journalist is emotional when reporting about the story
- I have heard it from different sources
- I do not know

10. What would you check first in social networks if you suspect that post is fake? 
Select all that apply

[If and how news is cross-checked –L2D curriculum]
- Number of shares of the post
- Number of comments to the post
- Account where information is spread +1
- If post contains a picture or not
- I will check if my friends are sharing it as well
- Checking the website from which the post originated +1
- If everyone is sharing it, it must be true
- I don’t care about checking and just ignore it
- I will read it carefully
- All from above
- I do not know
Section 4: Trust

1. If you heard about something important to you happening, where would you go first to try and find out if it were true? [Select one response]
   - Consult with my friends on their opinion
   - I will cross check from multiple sources
   - Nothing - I wouldn’t try to find out if it were true
   - Don’t know

2. [Select all that apply]2 (new). Remembering that this is an anonymous survey and no one is judging, do you trust any sources?
   - Yes: Which ones? Please list ________________________________
   - No: Then why do you watch news? ____________________________

3. Are you aware of sponsored/ “paid for” materials in the media, as well as hidden advertising presented in the form of news? [Select one response]
   - Yes
   - No
   - Maybe

4. Is the issue of sponsored/ “paid for” materials in the media important for you? [Select one response]
   - Very important
   - Rather important
   - Rather not important
   - Not important
   - Hard to say
   - Don’t know

5. Indicate the degree to which you agree with this statement “The ownership of TV is important to me” [Select one response]
   - Very important
   - Rather important
   - Rather not important
   - Not important
   - Hard to say
   - Don’t know
6. How often do you come across Dzhynsa when you read or watch news?

1. Almost in every material
2. About in half of materials
3. Significantly less than in half of materials
4. Never
5. I do not know what dzhynsa is

Section 5: Media locus of control

On a scale of 1 to 5 where 1 is strongly agree and 5 is strongly disagree, please rate how much you agree or disagree with this statement.

1. If I am misinformed by the news media, it is my own behavior that determines how soon I will learn credible information.
2. I am in control of the information I get from the news media.
3. When I am misinformed by the news media, I am to blame.
4. The main thing that affects my knowledge about the world is what I myself do.
5. If I pay attention to different sources of news, I can avoid being misinformed.
6. If I take the right actions, I can stay informed.

Section 6: (Sorts L2D participants and control group)

Did you take part in training on media literacy during winter 2015-2016?

1. Yes
2. No
Section 7: follow-up questions (L2D participants only)

1. If answer “Yes” to G1. For how long did the training last?
   - Up to 1.5 hour
   - 2-4 hours
   - 5-8 hours
   - More than 8 hours
   - I do not remember

2. Did you conduct trainings on media literacy yourself?
   - Yes
   - No

Please try to remember your attitudes and behavior before the training on media literacy and compare what you do now.

3. Do you now check additional news that you read in newspapers, heard on the radio, seen on television or found on the Internet, in other sources? Choose one answer for each row.

<table>
<thead>
<tr>
<th>Before the training</th>
<th>Almost always</th>
<th>Sometimes</th>
<th>Very rarely, only when I doubt the news</th>
<th>Never additionally check</th>
</tr>
</thead>
<tbody>
<tr>
<td>Now</td>
<td>Almost always</td>
<td>Sometimes</td>
<td>Very rarely, only when I doubt the news</td>
<td>Never additionally check</td>
</tr>
</tbody>
</table>

4. How much were you sure that you were able to analyze the truthfulness of the media content (content of news on television, radio, in the press or on the Internet) BEFORE the training?

1-10 scale where 1 is not sure at all, and 10 is completely confident

5. How much are you sure that you are able to analyze the truthfulness of the media content (content of news on television, radio, in the press or on the Internet) now?

1-10 scale where 1 is not sure at all, and 10 is completely confident

6. How would you evaluate your knowledge / skills about how to distinguish true news from false ones BEFORE the training?

1-10 scale where 1 is very bad, and 10 is very good

7. How would you evaluate your knowledge / skills about how to distinguish true news from false ones now?

1-10 scale where 1 is very bad, and 10 is very good
8. **How confident are you in analyzing the truthfulness of media content**

<table>
<thead>
<tr>
<th>Before the training</th>
<th>Very confident</th>
<th>Confident</th>
<th>Neutral</th>
<th>Not confident</th>
<th>Not confident at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Now</td>
<td>Very confident</td>
<td>Confident</td>
<td>Neutral</td>
<td>Not confident</td>
<td>Not confident at all</td>
</tr>
</tbody>
</table>

9. **Do you agree with the following statements?**

<table>
<thead>
<tr>
<th>BEFORE the training I cross-checked the news when I had doubts about the content</th>
<th>Definitely did</th>
<th>Probably did</th>
<th>Might or might not have</th>
<th>Probably did not</th>
<th>Definitely did not</th>
</tr>
</thead>
<tbody>
<tr>
<td>Now the training I cross-check the news when I have doubts about the content</td>
<td>Always do</td>
<td>Very often</td>
<td>Sometimes</td>
<td>Rarely</td>
<td>Never</td>
</tr>
</tbody>
</table>

10. **How many people (friends, relatives, colleagues) did you transfer the knowledge / skills received in the media literacy training?**

- No one
- 1-5 people
- 6-10 people
- 11-20 people
- More than 20 people