

Секция	Описание
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Тема	The effectiveness SIFT (stop, investigate, find, trace) framework in evaluating research sources.
Аннотация (150–250 слов)	<p>The rapid growth of digital information requires students to develop strong source evaluation skills to ensure the reliability and validity of their academic work. Under the NIS program, students regularly participate in research activities in various subjects; however, diagnostic data revealed a lack of ability to critically evaluate online sources: most students relied on the first search result and rarely studied authorship. The purpose of this study was to evaluate the effectiveness of the SIFT (Stop, Investigate, Find, Trace) structure in improving source assessment skills among 9th grade students and to examine whether simplifying this structure improves understanding of the assessment process. 32 students participated in the study, and a mixed approach was used, including preliminary and final surveys, targeted covert surveillance, evaluation of student-created source banks based on headings, and mutual peer review. The intervention consisted of a structured sequence of 16 lessons integrating the modified SIFT structure. The results showed a significant improvement in students' evaluative behavior: dependence on first-time sources decreased from 97% to 19%, fact-checking increased from 69% to 94%, and authorship verification increased from 0% to 84%. The observational data confirmed the systematic use of lateral reading and improved argumentation quality. The results show that the integration of the simplified SIFT framework effectively enhances research skills, critical thinking, and media literacy in secondary education.</p>
Актуальность и обоснование проблемы	<p>Overwhelmed with the excessive amount of information, students should be able to evaluate and fact-check sources they are reading, since it is a profound step while designing a mini-project, conducting research, or preparing for exams where analysing sources is core. Within the framework of NIS Programme students are regularly exposed to the research activities across different subject areas. Despite this it is observed that students lack source evaluation skill and may use unreliable and untrustworthy sources, which may lead to disinformation and invalid research results. Students usually rely on the first found source without analysing author's expertise and cross-checking with alternative sources.</p> <p>This research was conducted at Nazarbayev Intellectual School Oskemen, where developing students' research and critical thinking skills, along with increasing media and information literacy are priority areas. However, there is a gap between competencies which students should gain as they progress through NIS Programme and the actual</p>

	<p>level of students' source evaluation skills. Thus, there is a need for a systematic intervention and implementation of a structured instrument to evaluate the credibility of the sources. The anticipated result of this action research is the effective integration of a simplified SIFT framework into English lessons which will assist students in navigating in the vast amount of information and verify it. This particular technique is chosen as it provides straightforward, actionable steps that are easy to understand and implement.</p>
<p>Цель и исследовательские вопросы</p>	<p>The main aim of this research is to evaluate the effectiveness of SIFT framework in developing students' source evaluation skills.</p> <p>The following research question guided this research:</p> <ol style="list-style-type: none"> 1. To what extent does the SIFT framework improve students' ability to evaluate the reliability of the sources? 2. To what extent does simplifying the SIFT framework assist students in understanding the process of evaluating sources?
<p>Теоретическая основа (кратко)</p>	<p>These days modern technologies pose challenges connected with safety, privacy, and keeping the balance between ensuring human rights are preserved and civil safety (Frau-Meigs & Torrent, 2009). Fast-paced development of media and information technologies increases the social gap between those who can find, analyze, critically evaluate, and confidently use information, and those who lack these skills. Media and information literacy is a key competency which a modern active citizen should possess. It allows freedom of speech, cultural diversity, and pluralism.</p> <p>In this regard it is extremely important to teach students source evaluation skill at school level, so they can make informed decisions while choosing different sources to rely on. This will also help them stay safe online, and form as media literate citizen.</p> <p>SIFT framework was chosen as the most appropriate approach to source evaluation, since it, as research shows, is a the most effective and practice-based strategy of digital source evaluation, comparing to traditional methods (Bull, 2021). The key feature of this framework is that it engages in "lateral reading" – simultaneously referring to external or alternative sources to cross-check information about the webpage and what is written there Wineburg & McGrew, 2019). However, this approach does not always explain to students the reasons for differences in the reliability of sources and is predominantly reactive in nature, not stimulating questions about missing voices, perspectives, and the influence of information on personal beliefs (Bull, 2021).</p>
<p>Методология</p>	<p>This study applied action research design, which allows a researcher to explore the problem in real-life settings without getting away from</p>

	<p>teaching in the classroom, which is a predominant factor for teaching practitioners. The research utilizes both quantitative and qualitative data collected via pre and post surveys, and observation. The sample size was limited to two Grade 9 groups (32 students).</p> <p>Pre and post surveys were taken in order to compare the level of students' source evaluation skills and monitor how they approach source evaluation before and after intervention strategy.</p> <p>Observation was utilized to confirm or contradict the survey results ensuring triangulation. Focused observation was applied to track the process of evaluating sources. The main focuses were whether students access other webpages to cross check information, follow steps of evaluation as suggested by SIFT framework, and how they make a conclusion.</p>						
<p>Реализация (ход исследования)</p>	<p>Stage 1 – Diagnostic stage.</p> <p>In order to make evidence-based decision of educational intervention it is crucial to collect data beforehand. It reduces teacher assumption and bias. To collect this data there were conducted implicit source evaluation activities during the lessons to assess the students' source evaluation skills. After these activities students were surveyed to find out how they worked with the sources. The results of this survey showed that out of 32 students:</p> <table border="1" data-bbox="544 1104 1465 1234"> <tr> <td>choose first found sources</td> <td>31</td> </tr> <tr> <td>fact-check information in the source</td> <td>22</td> </tr> <tr> <td>find further information about the author</td> <td>0</td> </tr> </table> <p>Stage 2 – Planning stage.</p> <p>At this stage various source evaluation approaches were examined. RAVEN, CRAAP test, and SIFT were meticulously analysed and the latter was chosen.</p> <p>A sequence of 16 lessons was planned where students were to apply SIFT to evaluate sources following four steps. This framework was modified and broken down into smaller steps so that it is easier to perceive for students:</p> <ol style="list-style-type: none"> 1. Stop - Step 1: Ask yourself if you know the website and the source of information; Step 2: Check its reputation in other web sources; 2. Investigate - Step 1: Study the source of information in details; Step 2: Identify what is the author's expertise and agenda; 3. Find - Step 1: Cross check the information in the source with other sources to find if there is a consensus; 4. Trace- Step 1: Find the original source to recontextualize. <p>Stage 3 – Implementation stage.</p>	choose first found sources	31	fact-check information in the source	22	find further information about the author	0
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Students:

1. were introduced to the SIFT technique and the importance of source evaluation;
2. contextualized and structured previously learned knowledge and apply it to create a checklist based on SIFT;
3. created a bank of trustworthy sources on the topic;
4. collaboratively developed source bank assessment rubrics.

Stage 4 – Observation stage.

At this stage a systematic data collection was conducted to evaluate the effectiveness of intervention strategy.

While the students were engaged in source evaluation activities there was focused covert observation.

Student name	Access other webpages to cross check information	Follow steps of evaluation as suggested by SIFT framework	Quality of conclusions
Student A			
Student B			
Student C			

Along with observation students' source banks were assessed against the criteria they developed beforehand. The results of a teacher assessment and peer assessment were compared, and personal feedback was given in case there is a great discrepancy.

A post survey was applied after all planned lessons were completed.

Stage 5 – Reflection stage.

At this stage a thorough analysis of the first research cycle results was conducted to assess the effectiveness of the intervention strategy and plan further steps.

It was revealed that:

1. breaking down SIFT framework contributed to a better understanding the source evaluation algorithm;
2. the quality of chosen sources increased due to thorough fact-checking;
3. students formally followed the steps without consciously considering issues of bias, missing perspectives, and hidden agendas.
4. The most difficult step was to evaluate the authors' expertise and their implicit or explicit messages.

Based on the intermediate results of the study there were implemented following changes:

	<ol style="list-style-type: none"> 1. An extra attention was made on evaluating an authors' expertise, their level of competency, claims made across various sources they have created; 2. More reflective activities were implemented to trigger conscious reading and decision making; 3. Open-ended analytical activities were applied which require not only blindly following the checklist but critically analyze the process. <p>Thus, the results of the first cycle led to a transition from a predominantly algorithmic verification of sources to a more profound development of critical and reflective thinking within the framework of media literacy.</p>												
<p>Результаты и главные выводы</p>	<p>Students' results confirmed the effectiveness of these activities in developing research skills. Students demonstrated improved understanding of source evaluation, as evidenced by their ability to create checklists, assess source reliability, and engage in peer review discussions.</p> <p>Pre and post survey results prove the effectiveness of the intervention strategy.</p> <table border="1" data-bbox="544 996 1445 1348"> <thead> <tr> <th></th> <th>Pre survey results (n of students)</th> <th>Post survey results (n of students)</th> </tr> </thead> <tbody> <tr> <td>choose first found sources</td> <td>31 (97%)</td> <td>6 (19%)</td> </tr> <tr> <td>fact-check information in the source</td> <td>22 (69%)</td> <td>30 (94%)</td> </tr> <tr> <td>find further information about the author</td> <td>0 (0%)</td> <td>27 (84%)</td> </tr> </tbody> </table> <p>Focused covert participant observation results demonstrated the following:</p> <ol style="list-style-type: none"> 1. 82% were actively engaged in. lateral reading, opening multiple webpages and cross-checking information 2. 89% systematically followed SIFT steps 3. 67% presented quality arguments to justify their source choices <p>Observation results also showed that the peer review process, in particular, provided valuable feedback and enhanced the overall quality of the source banks. The double-evaluated bank of resources on the particular topic was a bright evidence. The arguments students used to prove the reliability of the chosen sources is another confirmation of the framework's effectiveness.</p> <p>One of the weaknesses of the SIFT framework is that it assumes a certain level of digital literacy, including the ability to navigate online</p>		Pre survey results (n of students)	Post survey results (n of students)	choose first found sources	31 (97%)	6 (19%)	fact-check information in the source	22 (69%)	30 (94%)	find further information about the author	0 (0%)	27 (84%)
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	<p>sources and discern reputable websites. Individuals with limited digital literacy skills may struggle to apply the framework effectively. It appeared that the students lack internet search skills, in particular, they cannot choose suitable keywords/phrases to conduct a quality source search. Another limitation of this method is that it is not as detailed as other evaluation tools. However, it was chosen to cater the students' age and language level.</p> <p>There is always a high risk of bias in peer-assessment, students are likely to assess their friends higher than it is. The assessment results showed that some were overly critical while others were too optimistic. It appeared that group assessment did not match the teacher's assessment which led to misunderstanding. Therefore, the group was asked to re-assess their peers' source bank against the criteria again as a home task and write a short report clarifying their decision.</p> <p>Assessment, applying analytic rubric, is a time-consuming process, this is another problematic area. Students had to rush; however they were eager to discuss the assessment more.</p>
<p>Практические рекомендации</p>	<p>To further enhance the process of SIFT framework implementation and constantly applying it in teaching, it is recommended to consider implementing anonymous peer assessment to minimize the risk of bias. By keeping the identities of the assessors and the assessed confidential, students may feel more comfortable providing honest and objective feedback. Conduct peer calibration exercises where students compare and discuss their assessments may also guarantee consistency and alignment in evaluations. This can help students recognize and address any discrepancies in their assessments and promote more uniform approach to grading and promote the development of essential research skills. Offering training sessions on how to effectively conduct peer assessments will empower students to make more informed and fair assessments and use time efficiently.</p> <p>It is also important to expand the peer review process beyond group exchanges and include feedback from teachers of various subjects, who will act as external reviewers. This can provide additional perspectives and ensure a thorough evaluation of the reliability. Recognizing the initial struggle students faced in creating checklists, there should be additional support or scaffolding to help them rephrase framework statements into reader-friendly sentences. To address the students' lack of internet search skills it is necessary to provide explicit instructions, practical exercises and demonstrations on how to choose suitable keywords/phrases to conduct quality source searches.</p>
<p>Заключение</p>	<p>Intricately connected planning, implementing, observing, and reflection stages of the action research were highly efficient in addressing the main aim. All steps collectively contributed to developing students' research skills. Students' results confirmed the effectiveness of these activities in developing research skills. It can be</p>

	<p>claimed that this sequence of lessons, conducted under the action research, confirms the SIFT framework is efficacious in developing source evaluation skills to conduct research. The double-evaluated bank of resources and the quality of students' arguments confirm the sustainability and value of the implemented changes.</p>
Список литературы	<ol style="list-style-type: none"> 1. Bull, G. (2021). Lateral reading and the SIFT method: Strategies for evaluating online information. <i>Journal of Media Literacy Education</i>, 13(2), 45–58. 2. Frau-Meigs, D., & Torrent, J. (2009). <i>Mapping media education policies in the world: Visions, programmes and challenges</i>. UNESCO. 3. Wineburg, S., & McGrew, S. (2019). Lateral reading: Reading less and learning more when evaluating digital information. <i>Teachers College Record</i>, 121(11), 1–40.
Приложения (при необходимости)	-