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IMPLEMENTATION OF MIND MAPPING IPTEKS FOR PUBLIC SPEAKING BY PKK CADRES IN HOUSEHOLD WASTE SORTING

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ABSTRACT

PKK (Family Welfare Movement) cadres often deliver waste management messages spontaneously, so their talks tend to jump between points and lack a clear call to action. This community service program implemented mind mapping as a tool for structuring messages before speaking to residents. The training involved PKK cadres in Bahagia Village, Babelan District, Bekasi Regency on 20 June 2026 through material delivery, group practice, poster making, and presentations. The material introduced the definition of mind mapping, five reasons for using it in public speaking, five steps for making one, and sample mind maps and posters. The product was analysed qualitatively through a review of the group poster "Sort Your Waste Starting at Home". The poster reflected a mind map structure: one central topic, three branches for waste categories, short keywords, colour coding, and a closing call to action. The review also found one content error: cans were placed in the hazardous waste category. These results show that cadres can apply mind mapping to turn outreach messages into an ordered, visual form, provided the media content is validated before wider use.

Keywords: *IPTEKS; mind mapping; public speaking; PKK cadres; waste sorting*

INTRODUCTION

Household waste sorting remains an unresolved task in many settlements. Organic, inorganic, and hazardous waste are often mixed together, then burned or dumped without sorting. Various programs such as composting, waste banks, and plastic reduction have been introduced (Mappau & Islam, 2022; Winarti & Azizah, 2016), but their results depend on how the message reaches residents.

PKK cadres are an important channel for this message because they are close to families and resident forums (Prihtanti et al., 2024; Utami & Godjali, 2020). In Bahagia Village, Babelan District, Bekasi Regency, initial discussions with the partners showed that cadres tend to deliver material spontaneously. The content of their talks jumps around, duration is hard to control, and the call to action at the end is often unclear. Community service experience in Bahagia Village also shows that practice- and presentation-based training can help participants apply the knowledge they have gained to communication products (Eriyani et al., 2023; Murtadho et al., 2022).

This problem relates to how ideas are organised before speaking. Lucas (2019) stresses that effective speeches rest on organising the main ideas and on an opening, body,

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and closing framework. Mind mapping offers a visual way to build that framework. Buzan and Buzan (2006) describe a mind map as a branching arrangement from one central idea with keywords, colours, and images.

The application of mind mapping to speaking ability has been studied in schools. Putri et al. (2026) reported an increase in students' average speaking ability from about 64 to 75 over two cycles of classroom action research. Yarmi et al. (2025) showed that digital mind mapping supports cognitive engagement in writing skills. In community service, concept map training has been given to teachers (Dasmo et al., 2020). Its application for PKK cadres as a tool for structuring environmental messages has not been widely reported. Experience in developing teaching materials based on multimodal literacy in Bahagia Village shows the importance of combining verbal and visual elements in learning products (Eriyani et al., 2025; Murtadho et al., 2025). This principle is relevant to the waste sorting poster in this activity, even though the targets and aims of the activities differ.

This article aims to (1) describe the *mind mapping* IPTEKS package that was implemented and (2) examine the group poster as a product of applying *mind mapping* in waste sorting messages.

METHOD

Partners and implementation

The activity took place on Saturday, 20 June 2026 from 08.30 to 12.00 WIB at the Bahagia Village Hall, about 40 km from the Universitas Negeri Jakarta campus. The activity partners were the Bahagia Village Office and the PKK Mobilisation Team of Bahagia Village. There were 19 PKK cadre participants. The implementation team consisted of four lecturers and three students of the Indonesian Language and Literature Education Study Program.

This training was jointly organised by three community service programs with the same participants. In the material session, the team leader presented the *mind mapping* IPTEKS together with the students. Participants were then divided into three groups to organise ideas using *mind mapping* and put them into posters. The next session was a poster presentation by group representatives, followed by a closing summary and brief evaluation.

IPTEKS package

The IPTEKS implemented is a method, not a physical tool. This package consists of *mind mapping* material as an aid for *public speaking*, sample mind maps and posters, and group practice that turns mind maps into posters and presentations.

Data analysis

Data came from the material slides, documented group posters, and presentation documentation. Posters were analysed qualitatively using two criteria. The first criterion is conformity with the mind map structure according to Buzan and Buzan (2006), namely a central idea, main branches, keywords, and colour. The second criterion is conformity with the structure of a speaking message, namely an opening, body, and closing in the form of a call to action (Lucas, 2019). The accuracy of the sorting content was also checked. The training did not use a *post-test* or a scored rubric.

RESULTS AND DISCUSSION

Material on the IPTEKS *mind mapping*

The material titled "Communication for a Better Earth" is organised into four parts (Table 1).

Table 1. Content of the IPTEKS material on *mind mapping*

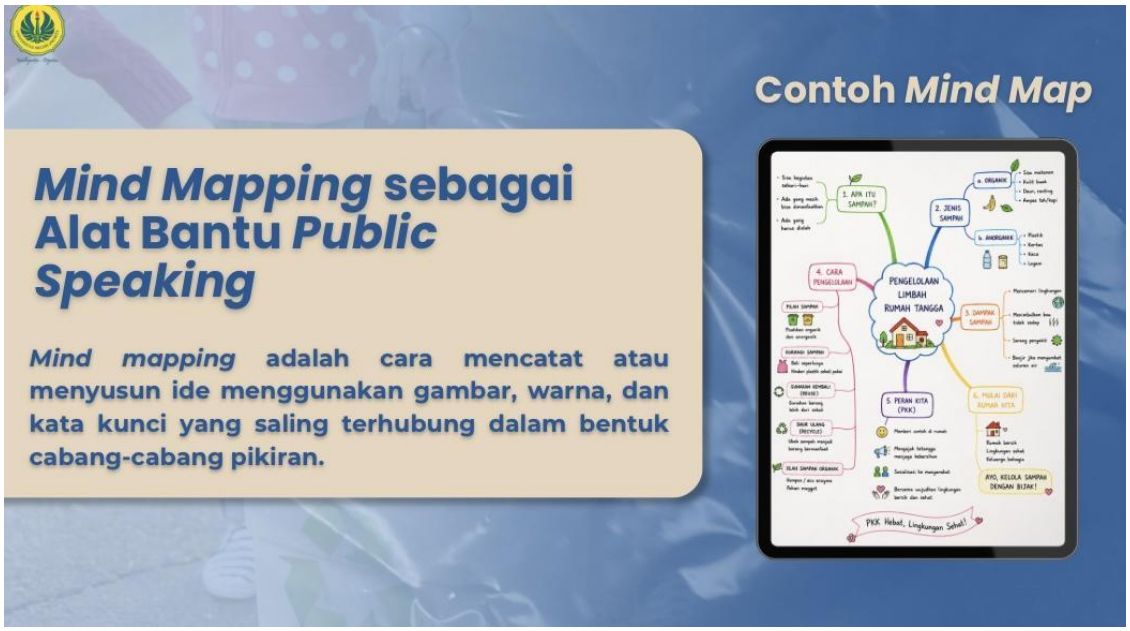
Material section	Main content
Definition	*Mind mapping* is a way of taking notes or organising ideas with pictures, colours, and keywords that are connected in branches of thought
Reasons for use in *public speaking*	Organising material in an orderly way, remembering key points easily, avoiding jumpy delivery, speaking fluently without reading long texts, and making delivery more engaging
Steps for making	Determining the main topic, creating several main branches, adding keywords, using colours or simple images, and using the map as a guide when speaking
Examples	One sample mind map and two sample posters themed on rejecting plastic and recycling waste

This material connects *mind mapping* with two needs of cadres at once. First, the mind map becomes a speaking framework so that cadres do not depend on long texts. Second, the same map can be derived into a poster as a visual medium for residents. The sample posters in the material give a concrete picture of the final result expected from group practice.



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[Figure 1. Slide of the IPTEKS material on *mind mapping*]

Poster as a product of applying *mind mapping*

Group 3 produced the poster "Sort Your Waste Starting at Home" with the slogan "Waste Brings Blessings!". The poster contains three numbered messages, each connected to a coloured container. The first message urges disposing of batteries and cans in a red container labelled B3. The second message reminds people to dispose of used cardboard and bottles in a yellow container labelled non-organic. The third message directs vegetable scraps to a green container labelled organic. The poster closes with the sentence "Let us dispose of waste in its proper place. If not from now, then when?"

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[Figure 2. Poster "Sort Your Waste Starting at Home" by Group 3]

Table 2. Review of the Group 3 poster

Aspect	Poster element	Findings
Central idea	Title "Sort Your Waste Starting at Home"	One clear main topic
Main branches	Three categories: B3, non-organic, organic	Parallel branches that do not overlap
Keywords	A short message on each branch	One sentence per branch, easy to repeat
Colour	Red, yellow, and green according to category	Colour functions as a code, not decoration
Message structure	Slogan as opening, three messages as body, call to action as closing	Follows the pattern of opening, body, and closing
Content accuracy	Cans placed together with batteries in the B3 category	Needs correction; cans are generally classed as recyclable non-organic waste

This poster shows that the mind map structure is carried over into the final medium. The title functions as the central idea, the three waste categories become the main branches, and each branch is summarised into one short sentence. Colour is used as a category code, in line with the recommendation of Buzan and Buzan (2006) that colour help grouping and memory.

The poster structure can also directly become a speaking framework. The slogan opens the talk, the three branches form the body, and the sentence "If not from now, then when?" serves as a closing that urges residents to act. Lucas (2019) positions the closing

as the part that reaffirms the main idea, and in persuasive speeches the closing contains a call to action. In this poster, that call is already stated explicitly.

The review also found a classification error regarding the can. This error shows that *mind mapping* helps organise the form of a message but does not guarantee the accuracy of its content. Media made by cadres therefore needs to be reviewed by a facilitator before being used in outreach to residents.

Group presentations

In the presentation session, group representatives explained the poster in front of the forum with the poster displayed on a screen. The poster functioned as a substitute for notes: presenters only needed to follow the order of the branches without reading long texts. One participant stated, “At first I was afraid to speak in front of many people, but after being trained it turned out I could do it if I knew the flow. *Mind mapping* is very helpful, so I am no longer confused about what to say.”



[Figure 3. Poster presentation by a Group 3 representative]

Two other groups produced posters themed on making compost and reducing single-use plastic. Both products are part of the same series of activities but are not the object of review in this article.

CONCLUSION

The *mind mapping* IPTEKS was implemented through material on definition, reasons for use, steps for making, and examples of mind maps, then practised in making posters and group presentations. The poster “Sort Your Waste Starting at Home” shows a complete mind map structure, namely one central idea, three branches, keywords, colour coding, and a closing call to action. This structure also serves as a speaking framework for presenters.

The review of the poster also shows the need for content validation, because cans were placed in the B3 category. Further development needs to document participants' mind maps, apply a speaking performance rubric, and add a content-checking stage for the media before cadres carry out outreach in resident forums.

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