Report: Duplicates onboarding & comparison flow (Feb-Mar 2023)

Schedule	Duplicates Onboarding, Search and Collaboration Research (Feb-March 2023)
Script	Duplicates Onboarding, Search and Collaboration 23/02/23
Prototypes	**Onboarding:** https://www.figma.com/proto/SwyHgUWOcXAatUBTwH5iYg/Duplicates-2?page-id=1961%3A199410&node-id=1961%3A199413&viewport=1518%2C343%2C0.44&scaling=min-zoom&starting-point-node-id=1964%3A199777 - Connect your Figma account **Comparison Flow:** https://www.figma.com/proto/SwyHgUWOcXAatUBTwH5iYg/Duplicates-2?page-id=2090%3A210509&node-id=2090%3A212626&viewport=-1347%2C880%2C0.15&scaling=min-zoom&starting-point-node-id=2258%3A227468 - Connect your Figma account
Participants	**Onboarding:** 6 participants **Comparison Flow:** 5 participants
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Goals

Duplicates Onboarding

- Check the participants' **understanding of the message** and their **expectations about the functionality.**
  - Hypothesis: participants with a higher understanding of how Mendeley finds and manages duplicates will help them solve them more confidently.

Duplicates Comparison Flow

- Validate the understanding and affordance of the improved compare and resolve flow

- Validate the usability of select and preview logic of the flow

Methodology

- Remote user interviews (10-20 min).

Participants

Duplicates Onboarding

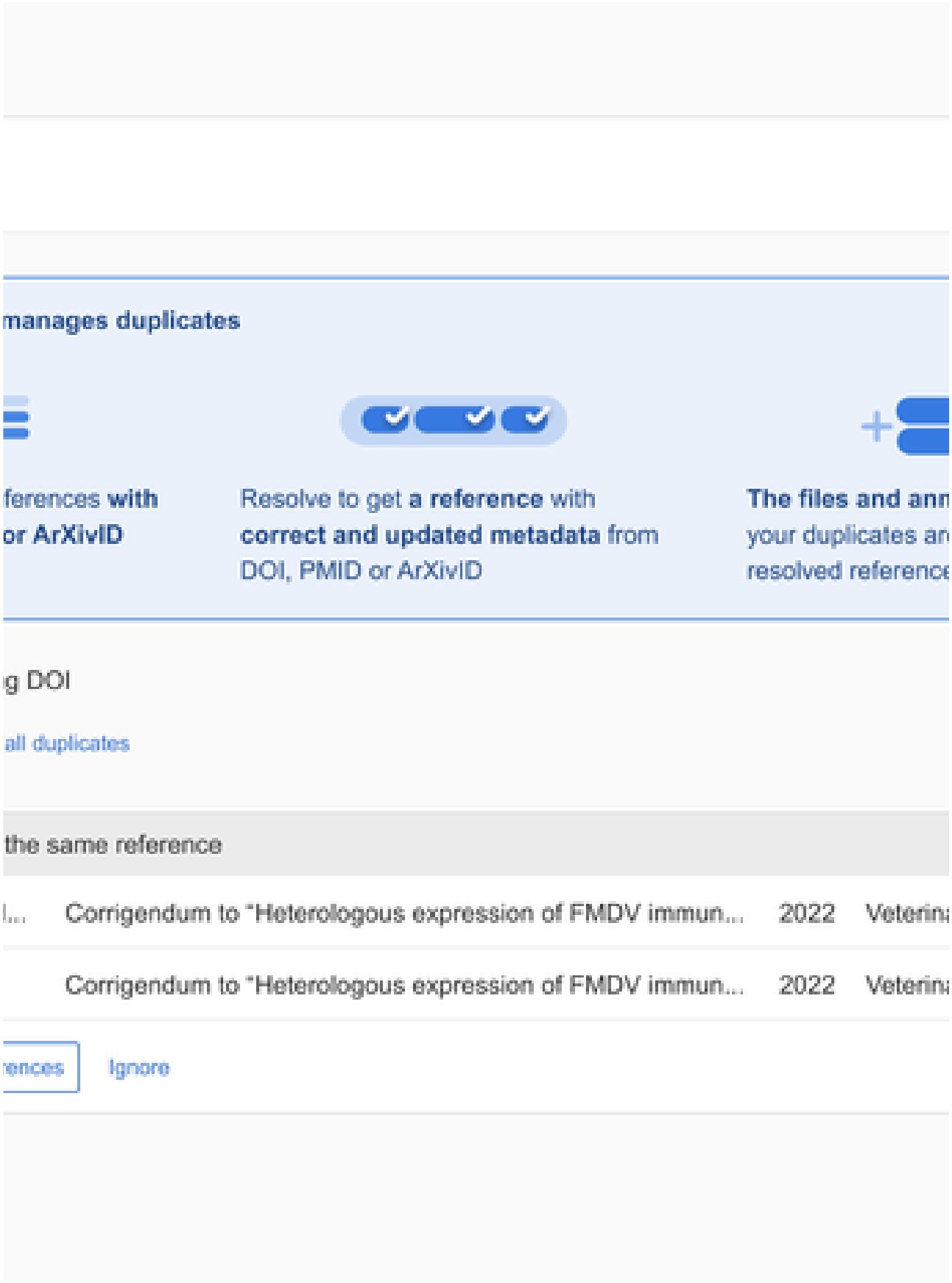
# of Participants	Roles	Research Field	Location of Institution
6 (4 Advisors, 1 from CDI, 1 from Marketing)	Lecturer (2) Researcher (1) Professor (1) Post-doctoral (1) PhD student (1)	Computer Science (2) Engineering & Technology (2) Medicine & Health (1) Social Sciences (1)	Malaysia (1) Nigeria (2) India (2) Spain (1)

Comparison Flow

# of Participants	Roles	Research Field	Location of Institution
5 (2 Mendeley advisors) (3 from CDI panel)	Professor (1) Post-doctoral (1) PhD student (3)	Engineering & Technology (1) Natural Sciences (1) Medicine & Health (1) Social Sciences (2)	Morocco (1) France (1) Brazil (1) Italy (2)

Highlights & Next Steps

Duplicates Onboarding



	Highlights
What went well ✅	• Only 2/6 participants noticed the onboarding banner • 1/6 participants understood the whole message clearly • 4/6 participants understood that Mendeley finds **duplicates based on the DOI,** but could not clearly interpret the message.

What could be improved ⛔	• Understanding of the message
	  ◦ 3/6 participants needed **time to interpret** the message
	  ◦ 3/6 participants **didn't understand** the message clearly
	  ◦ 1 participant mentioned it is not clear how Mendeley will resolve duplicates for references apart from journal articles
	• 1 participant had difficulties to read text on blue background

Next steps	• Identify improvements based on the participant feedback and update designs • Add the updated UI and accessibility to the documentation
Additional Insights	• For **"Resolve",** 2/6 participants understood Mendeley would resolve based on the DOI ◦ 1 participant mentioned to go with **"Resolve" to avoid manual process.** • Most participants are encouraged to try **"Compare differences"**

	◦ 5/6 participants would like to compare differences or have an option to keep or delete a reference.

Comparison Flow

	Highlights
What went well ✅	• Most of the participants understood they can compare differences on the comparison modal. ◦ 4/5 noticed the differences in author names immediately. • The **Select differences area (RHS of modal)** tested well with the participants. ◦ 5/5 participants understood the various options related to differences in author name and volume. ◦ The affordance of selecting the right option was clear to 4/5 participants. • 5/5 participants found the **modal title** clear • 5/5 participants were able to notice and use **back/next CTA** buttons • 3/5 participants were able to notice the options with differences and **interact with the radio button options** easily • **Default selected option with DOI:** ◦ 3/5 participants found selected metadata based on the DOI is reliable • **RHS panel** ◦ 5/5 participants' attention went to the RHS panel without any distraction ◦ 4/5 participants understood the preview message and proceed to Confirm ◦ 4/5 participants said they can go back to the comparison flow with the “Compare differences” CTA
What could be improved ⛔	• 2/5 expected all the differences to be shown at once • **Preview Area of the modal (LHS of modal)** didn’t test well. ◦ 4/5 participants didn’t understand it is the preview of resolved reference. • **Relationship between left and right side of modal:** ◦ 4/5 participants didn’t notice the change in LHS when they selected an option on the right. ◦ Participants, in general, understood that LHS is controlled by selecting options in RHS, but 3/5 didn’t think it is the preview of the resolved reference • There was unclarity around **awareness of other metadata differences:** ◦ 4/5 participants were not sure if there are other differences apart from the author names ◦ 2/5 participants thought all the differences will be shown on LHS at once • 5/5 participants didn’t notice the **duplicates icon button**. Neither of them clicked on the metadata block to view difference
Next steps	• Identify improvements based on the participant feedback and update designs • Add the updated UI and accessibility to the documentation

Average Ratings

Duplicates Onboarding

🗒️ **Easy to Understand** 🗒️ **Trust**

4.6 / 5

4 / 5

Comparison Flow

🗒️ **Easy to Understand**

4.6 / 5

🗒️ **Clarity of the design**

4.6 / 5

Detailed Analysis

Duplicates Onboarding

Research Questions		**P1811** **Lecturer** in **Computer Science** Published (1-10) MRM MD MCITE	**P1812** **Lecturer** in **Engineering and Technology** Published (11-50) MRM	**P1813** **Researcher** in **Medicine and Health** Published (11-50) MRM MD MCITE	**P1814** **Professor** in **Social Sciences** Published (11-50) MRM MD MCITE	**P1815** **Post-doctoral** in **Engineering and Technology** Published (11-50) MRM MD MCITE	**P1816** **PhD** in **Computer Science** Published (1-10) -
Interpretation of the message							
• What does **this banner tell you**?	• Only 2/6 participants noticed the onboarding banner • 3/6 participants need time to interpret the message • 3/6 participants didn't understand the message	• Understood the message; reads block by block • Didn't notice the banner though	• Didn't understand the message; thinks 4 blocks are 4 different ways by which Mendeley resolves duplicates • Didn't notice the banner unless prompted	• Notices the onboarding banner • Understands the banner is collapsible and finds it useful • Didn't understand the message completely	• Notices the onboarding banner • participant reads the content and understands it but needs time for interpretation	• Understood the message; • Didn't notice the banner though	• participant said they understood but their interpretation is different • Didn't notice the banner though
• What do **you want to do next**?	• 5/6 participants would like	• Either click 'Resolve' or	• participant would like to click	• participant might go to 'Compare	• participant would like to	• participant would go with	• participant would like to manually

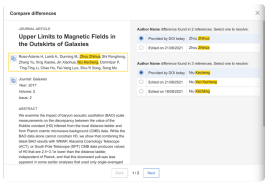
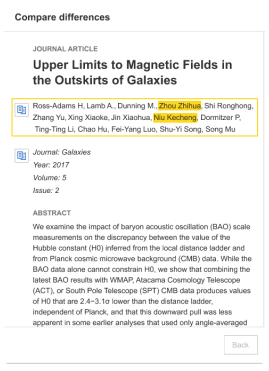
	to compare differences or have an option to keep or delete a reference. • Only 1 participant mentioned to go with "Resolve" to avoid manual process.	'Compare differences'	"Resolve" thinking that it will allow them to pick up one reference as the main one.	differences' to view additional info	compare differences to view more details.	"Resolve" as they want to save time and not do it manually	check the conflicting info and merge.
• What would **you expect to happen**?	• For "Resolve", 2/6 participants understood Mendeley would resolve based on the DOI • For "compare differences", 5/6 participants would like to compare differences • 2 participants are unclear of the "Ignore" functionality	• For "Resolve", participant thinks they will be prompted if there are conflicts on merge. *"…I think it will merge the reference. If DOI have conflicts will ask us to choose metadata from version and version b…."* • For 'Compare differences', participant thinks they can do a metadata comparison. Manually keep the one they choose. • participant is not clear on the 'Ignore' functionality	• For 'Resolve', participant thought they'll be prompted to pick one or the other reference. (Mental model is - one reference is kept as the final reference.) • For "Compare differences", participant thinks they can manually compare differences and pick the one they like • For Ignore, participant understands if they ignore, both references will go away from this list.	• Not sure what would happen *"If I am not sure what it is going to happen, I would go with Compare differences. Maybe that gives me additional information."*	• participant's mental model is based on - Keep one reference and delete others	• participant exactly understood what would happen if they click 'Resolve' *"…it'll cross-check DOIs.. if multiple entries are there, then it'll merge or eliminate…… keep the latest entry…"* *" manual process will be done by the software. "*	• participant expects mendeley would prioritise the reference with the DOI, keep the main file

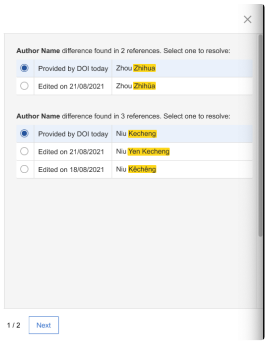
		"… I just ignore it for now. So maybe later on when I want to check for duplicates, it's still there…"	*"….you don't want to remove them. If I click Ignore it means that both will go away."*				
Expectations about the functionality							
• How would you describe **how Mendeley finds duplicates**?	• 4/6 participants mentioned Mendeley finds duplicates based on the DOI • 1 participant had visual issues reading text on blue background	• Understood that Mendeley finds duplicates based on the DOI.	• Didn't understand the message • Had visual issues to view text on a blue background *"….I couldn't read it well, it was difficult to read it on the blue colour…."*	-	• Understood that Mendeley finds duplicates based on the DOI and other identifiers. • Understood that a conflict happens when identifiers are same, but date is different	• Understood that Mendeley finds duplicates based on the DOI and other identifiers.	• Understood that Mendeley finds duplicates based on the DOI
• How would **describe how you can manage duplicates** in that design?	• 3/6 participants are not clear how Mendeley finds duplicates • 1 participant mentioned it is not clear how Mendeley will resolve duplicates for references apart from journal articles	• participant thinks it is not clear how Mendeley will resolve duplicates for references apart from journal articles *"….but what about books? And also newspaper, they don't have the identifier, like a journal. So if I just find*	• Didn't understand the process. *"The system identifies the duplicates through the title, author and also the doi. It removes one of the duplicate. It also Ignores the duplicates."*	-	• participant thinks Mendeley would show them the updated version of the reference and ask them for their preference *"….. that it is same, but there's an updated version which is available. And the researcher may select*	• participant understood the process	-

		the duplicates solely based on the identifier, I don't think that it can help to cater for other type of references."			*that which one he wants to go forward, just the way we use in Ms. Word to compare to documents"*		
Ratings							
Based on the design you saw, on a scale of 1-5, **how easy was it to understand** how Mendeley finds and manages duplicates?	4.6/5	4 participant thinks it is not clear how Mendeley will resolve duplicates for references apart from journal articles	5 *"because it's very easy to go the first item in the list."*	3.5 participant says they can't rate fairly	5 Finds it easy to read	5 Easy to understand	5
on a scale of 1-5, **how much do you trust** Mendeley to resolve your duplicates accurately for you?	4/5	5 Because it provided a 'Compare differences' option	4 participant didn't trust fully how Mendeley identifies duplicates *"They way duplicates are identified. When you say duplicaates, they are variations of the paper, which are not really duplicates."*	3 *"Around 3 until I give it a try. I am not sure what I can see and it can do."*	3 Would like to compare differences before going for automatic resolve	5	4 It will take time to trust fully

Comparison Flow

Research Questions	Insights	P1817	P1818	P1819	P1820	P1821

		PhD in **Natural Sciences** Published (1-10) MRM MD MCITE	**PhD** in **Engineering and Technology** Published (1-10) MRM MCITE	**Professor** in **Social Sciences** Published (more than 100) MRM	**Post-Doctoral** in **Medicine and Health** Published (11-50) MRM MD MCITE	**PhD** in **Social Sciences** Published (1-10) MD MCITE
Understanding of comparison modal						
First Impressions 	• 4/5 noticed the differences in author names • 2/5 expected all the differences to be shown at once	• participant understands it is showing differences section wise • Identifies differences in author names by looking at the right hand side	• participant thinks there is a lot of information. • participant scrolls and reads the left hand side preview	• Sees the highlighted author names on left and differences in the right • Acknowledges that differences in special characters is a very common problem	• Sees the 2 highlighted author names on left • participant scrolls and reads the left hand side preview	• Sees the 2 highlighted author names on left • Identifies differences in author names by looking at the right hand side
Understanding of the **preview metadata space** (left hand side of the modal) 	• All participants identified there are differences in 2 author names • 4/5 participants didn't understand it is the preview of resolved reference	CLEAR participant understands there are 2 differences in author name participant understands that it is the preview of the corrected reference	PARTIALLY CL... • participant thinks that it is the preview of selected reference • Understands there are 2 authors with differences	PARTIALLY CLEAR • participant thinks it is a preview of the individual reference selected by the radio button	PARTIALLY CLEAR • Understands there are 2 authors with differences • participant expects the preview to happen when they click 'Next'	PARTIALLY CLEAR • Understands there are 2 authors with differences • Didn't understand that it is the preview of the resolved reference "The volume is probably wrong in one of them"
Understanding of the **select metadata space** (the right hand side of the modal)	• All the participants identified the various options based on differences for author name and volume	CLEAR • participant identifies character differences in various options. • They understand	CLEAR • participant understands the differences for 2 authors and the	CLEAR • participant understands the differences for 2 authors and the volume view	CLEAR • participant understands the differences for 2 authors • Also understands	PARTIALLY CLEAR • participant noticed the various options and differences • participant didn't understand

	• 4/5 participants understood that they can select an option they prefer to keep	that current name on the left is suggested by DOI • participant understands they can select the option to keep	volume view • participant understands they can select the option to keep "it give me the possibility to choose which author names I prefer to keep."	• participant understands they can select the option to keep	the volume view • participant understands they can select the option to keep	how it works "So how do you resolve this? Like is there a database for confirming the information or do you do it by yourself?"
Understanding the **relationship between left and right area** (the select and preview logic)	• 4/5 participants didn't notice the change in LHS when they selected an option on the right. • Participants, in general, understood that LHS is controlled by selecting options in RHS, but 3/5 didn't think it is the preview of the resolved reference	PARTIALLY CLEAR Participant understood what they see on the left is selected by DOI, but they didn't know it can be changed by radio buttons	NOT CLEAR • Participant didn't mention anything about the changes in left hand side area "… if I select another option and then I go next, it'll change the name of the author and it will stay on the Mendeley database."	PARTIALLY CLEAR • Participant clicks on the radio button and didn't notice any change on the left • Participant thought selecting the radio button will update the left with the selected reference.	NOT CLEAR • Participant clicks on the radio button and didn't notice any change on the left	PARTIALLY CLEAR • Participant didn't understand they are seeing a preview of the resolved reference • They realised what is happening when they saw the change in volume on LHS on selecting the volume option from RHS "…. let me check something. If I change to four, it goes to four. Okay. Now I understand."
Validation of **modal title**	• 5/5 participants found the modal title clear	CLEAR Makes sense to the Participant	CLEAR Makes sense to the Participant	CLEAR Makes sense to the Participant	CLEAR Makes sense to the Participant	CLEAR Makes sense to the Participant

Awareness of **other metadata differences** apart from authors	• 4/5 participants are not sure if there are other differences apart from the author • 2/5 participants thought all the differences will be shown on LHS	PARTIALLY CLEAR • Participant easily clicks 'next' to explore more • But, they try to find more metadata difference by scrolling down on the authors name screen	PARTIALLY CL... • Participant thinks there are only differences in author name "I don't know actually if there are others." • Participant thinks there might be more due to 1/2 visual cue "..Maybe if I go next, yes, because it's saying one from two.."	PARTIALLY CLEAR Participant thinks there are only differences in author name, but they are aware of another page too due to 1/2 and Next button "The only metadata what I can see is the name, the name of two authors, nothing else, but, I see there's another page there."	NOT CLEAR Participant thinks there are only differences in author name; scrolls left hand side to see if there are more differences Participant thinks all differences will be shown at once in yellow "…because I don't see any other yellow parts. So I think there is nothing more highlighted, so there are no other differences. I think in the right part of this window I would have all the differences highlighted." 2/2 helped them to understand there are no more issues to view	
Findability and usability of CTAs						
Navigating using **Previous/Next** buttons	• 5/5 participants were able to notice and use back/next CTAs	CLEAR Notices and uses the next/back buttons	CLEAR Notices and uses the next/back buttons	CLEAR Notices and uses the next/back buttons immediately	CLEAR Notices and uses the next/back buttons	CLEAR Notices and uses the next/back buttons
Navigating using **Duplicate icon button or metadata block**	• 5/5 participants didn't recognise	NOT CLEAR Participant neither noticed the duplicates	NOT CLEAR Participant neither noticed the	NOT CLEAR Participant neither noticed the duplicates	NOT CLEAR Participant neither noticed the duplicates	NOT CLEAR Participant neither noticed the duplicates

	the duplicates icon button. Neither of them clicked on the metadata block to view differences	icon nor clicked on the block	duplicates icon nor clicked on the block	icon nor clicked on the block	icon nor clicked on the block	icon nor clicked on the block
Interpreting and selecting metadata options with **radio buttons.**	• 3/5 participants were able to notice the options and interact with the radio buttons.	PARTIALLY CLEAR They understand the radio button that is selected and selected option will be saved when they click 'Resolve' But they didn't understand they can do some action here	CLEAR Participant was very easily able to select options using radio buttons and knows that they will be saved "I can choose between these [radio buttons]. "	CLEAR Participant is easily able to select options using radio buttons and knows that they will be saved	CLEAR Participant was able to select options using radio buttons and knows that they will be saved	PARTIALLY CLEAR • Initially Participant didn't understand they can do any interaction • Later, they realised they can choose option which will reflect on LHS
Trust						
Which metadata they will select to resolve ?	• 3/5 participants found selected metadata based on the DOI is reliable • 3/5 participants wanted to check manually online	• Participant thinks provided by DOI is reliable • Will be hesitant to change options other than DOI • But if they have to change, they will either click "Resolve" or change manually by checking the source	• Participant mentions to check it manually with the paper • Also mentions to go with the DOI - feel it is accurate and most current	• Participant trust the one selected by DOI "I suppose if I have no time I can select DOI. • Participant will check Google Scholar if time permits	• Participant would like to go with the one which looks more accurate - example - one who has name with middle name "I would go with a more complete one." For the volume difference, the Participant prefers to check manually online	• Participant would like to manually check on Google
Understanding of RHS panel						

Understanding of **transition from modal to RHS panel**	• 5/5 participants' attention went to the RHS panel without any distraction	CLEAR Transition is clear - Participant focus is on the RHS panel	CLEAR Transition is clear - Participant focus is on the RHS panel	CLEAR Transition is clear - Participant focus is on the RHS panel	CLEAR Transition is clear - Participant focus is on the RHS panel	CLEAR Transition is clear - Participant focus is on the RHS panel and they expect the chosen changes to reflect on RHS panel
Validation of **Preview message**	• 4/5 participants understand the message and proceed to Confirm	PARTIALLY CLEAR Participant understands the message but unsure if the system will keep one file or merge both	CLEAR Participant understands the message "..all the information are here as like only one reference without the duplicates…"	CLEAR Participant understands the message and clicks Confirm	CLEAR Participant understands the message and clicks Confirm	CLEAR Participant understands the message
Clarity of **compare differences CTA button**	• 4/5 participants said they can go back to the comparison flow with the "Compare differences" CTA	CLEAR Participant understood they can go back to compare modal with the CTA	Participant said they would not need to do that. They can click on metadata fields and edit if required.	CLEAR Participant understood they can do that with the CTA, but finds no need to do that.	CLEAR Participant understood they can go back to compare modal with the CTA	CLEAR Participant understood they can go back to compare modal with the CTA
Other comments		For this Participant, the following metadata are important in the order of importance: • Title • Authors • Abstract • Keywords	• Participant understood the compare and resolve flow "..it will save the changes that I choose between the authors and the volume and then all	Participant interprets the acknowledgement message – is happy about preserving all the PDFs "I have both ones with annotations and the other. That's the good solution."	When the Participant clicked 'Next' on author's view, they came to know issues are being viewed one by one and 2/2 helped them to understand that there are no more issues to view	Participant trusts DOI version as the most recent version

			the three duplicates that was on the window before, it would just disappear." • It is important for them to resolve differences in title and authors	Participant is skeptical about other options apart from the one provided by the DOI. If they don't have time to check manually, they will go with the DOI	• Participant expected the preview reference on the second window of the modal	
Ratings						
How easy was it to compare differences and select metadata ?	4.6	5 Participant found it easy	5 Participant found it easy	4 "Comparing and selecting is never very easy. The tool is okay and intuitive, I can understand I suppose. " Participant would expect to see an option to view the source	5 Participant found it easy	4 Participant thought it took sometime for them that what they select in right affects the left preview area
How clear was the overall differences comparison feature ?	4.6	4 They need sometime to understand	5 "..but I had to take a couple minutes to understand how it worked. I got used to it."	5 "I wouldn't have any problem even without you. 5."	5 ".. And even if I expected maybe something different.. at the end, it was really simple to understand what I can do and how can I work with the differences."	4