

# Recommendations for introducing ranked choice voting ballots

Recommendations and research evidence for elections offices implementing ranked choice voting and deciding on a layout for ranked choice ballots and how many rankings to offer to support voters

**July 2018** 

hello@civicdesign.org civicdesign.org @civicdesign

## Introduction

The Center for Civic Design has partnered with the Ranked Choice Voting Resource Center and FairVote to research best practices for designing ranked choice voting materials, including ballot design, voter education, and results presentation to support the goal of making every vote count.

#### Best practice guidelines

This report builds on earlier best practices work published in 2017.

In the earlier research, we learned that when any ranked choice voting ballot is designed using best practices for layout and font size, voters were able to focus on how they wanted to rank candidates to express their intent, rather than on the mechanics of marking ballots.

The report, *Best practices for ranked choice voting*, is available from rankedchoicevoting.org/usability.

## Focus for this report

This report focuses more narrowly on the question of what layout for ranked choice ballots is most effective for voters, and how to help election officials choose a ballot design that:

- Is easiest for most voters to use without effort.
- Meets their preferences for the number of candidates who can be ranked.
- Allows both "power rankers" and "novice rankers" to vote confidently and comfortably.
- Works with their voting system.

## The research behind this report

Our goal in this work is to help election officials and others introducing ranked choice voting make good decisions about the ballot layout and number of ranking opportunities offered.

## This report is based on two studies

- A large scale study with 112 participants conducted in Denver in December 2017 compared 3 ballot layouts
- A study with 22 voters in Portland, Maine during the 2018 primary election compared 3 different sizes of grid-style ballots

#### Questions we asked

In the research for this report, we asked:

- Do voters have preferences and feel more confident using different ranking layouts?
- How many candidates would voters like to rank?

We also looked more closely at layouts for a grid-style ballot:

- Do different sizes of grid make a difference in how easily voters can mark their ballot?
- Does a larger grid encourage voters to mark more candidates, especially in a multi-winner contest?
- What strategies do voters use for marking their ballot?

Details about the usability tests are at end of this report.

# Flexibility in ballot layout is key to supporting voters

There is no single recommendation for the best ballot layout for ranked choice voting.

When ranked choice voting is new, a smaller number of ranks will meet the needs of most voters without overwhelming them.

**As ranked choice voting becomes more familiar**, voters are likely to be more comfortable with grids that offer more ranks.

Large grids – with more than 10-12 rankings - are difficult for many voters to use, both because they are more confusing to mark and because the offer of more choice forces voters into more decision-making.

Laws that require an opportunity to rank all candidates can create problems in contests with a large number of candidates by requiring large grids and making the ballot harder to mark.

#### Recommendations

- Laws should allow flexibility in ballot layout to avoid forcing ballots with large grids when a contest has many candidates.
- When introducing ranked choice voting, consider offering fewer ranks at first. A grid ballot with fewer columns may make novice rankers more confident.
- For jurisdictions where most voters are new to ranked choice voting the "sweet spot" between overwhelming novice rankers and discouraging power rankers is 5 to 8 ranks.

## Ballot layout affects voter behavior

Voters are confident using all ballot layouts, but had strong preferences for number of candidates to rank.

- Voters felt confident using their preferred ballot style. No matter what ballot style they said they preferred, ballots designed to best design practices instill confidence in voters that they voted as intended, and that their vote will count.
- Voters had strong preferences for how many candidates to rank. Most voters wanted to rank between 1 and 6 candidates, with only a small number wanting to rank more.
- Voters prefer ballots that match the number of candidates they want to rank. This means that voters with more experience or knowledge of ranked choice voting prefer ballots with more ranks than other voters do.
- The number of rankings offered on a ballot shape voter behavior. People rank more candidates on ballot styles that offer more choice, even when instructions emphasize that ranking is a choice.

#### Recommendations

In making a decision about ballot layouts, consider:

- The ballot layout voters are used to in your jurisdiction
- Voter preferences for number of candidates to rank
- Encouraging, but not forcing, ranking behavior

# Teach both the goals and mechanics of ranked choice voting

Include both concept *and* mechanics in voter education and outreach campaigns, so voters learn both how ranking works and how to mark their ballot.

Introducing any change to voting requires an outreach campaign. A large change like introducing ranked choice voting means explaining why the new voting method has been introduced and helping voters learn how to mark their ballot correctly. Include:

- **Concepts** goals for ranked choice voting, how it works, how ballots are counted, and how the winners are selected.
- Mechanics the rules for marking a ranked choice ballot, including options for how many candidates to rank, how to avoid errors like over-voting, and how to mark their choices.
- **Tips** mental strategies for remembering their choices, marking the ballot and checking for errors that will help voters rank candidates to match their intent.

#### Recommendations

When introducing a new ranked choice ballot layout, focus on the changes in the layout and tips for marking the ballot accurately and efficiently.

In both situations, be sure to connect the mechanics of ballot marking with how the ballot will be counted, so voters can determine their own ranking strategies.

## Voters have a variety of ranking behaviors

Voters have different approaches to ranking depending on their elections and ranked choice voting experience.

**Power rankers** are experienced voters who are generally confident with the concepts and activities required for ranked choice voting. They:

- Tend to be better informed about ranked choice voting
- Are comfortable with grids of any size
- Are more likely to use all ranking opportunities
- Have mental strategies to help themselves mark their ballot accurately, even on larger grids

**Novice rankers** are less experienced with ranking. They are less comfortable and confident and have fewer strategies to cope with the challenges. They:

- Typically have not used ranked choice voting before
- Prefer grids with five or fewer choices
- Tend to mark only 3-5 candidates
- Had few strategies to cope with the challenges of ranking

#### Recommendation

Consider the needs of both power and novice rankers in making decisions about ballot layout and voter education

## Power ranking tips can be taught

Power rankers used three types of strategies that can be taught as part of voter education.

#### Remembering choices. To stretch their memories, power rankers:

- Mentally placed candidates into "top," "middle" or "bottom" categories.
- Imagined candidate faces or symbols in order.
- Repeated and rehearsed candidate orders.
- Used crib sheets.

#### **Marking the ballot.** On wide grids, power rankers:

- Placed their finger on the column (rank) to mark their place.
- Used paper to remember their place or cover previous columns to remember their current location.
- Checked their ballot after each rank to help keep track.

#### **Checking for errors.** Power rankers:

- Checked each row to see that they selected a rank for each candidate.
- Checked each column for completeness and overvotes.
- Spot checked their choices to see if a candidate has the rank they remember.

#### Recommendation

Create voter education materials that include tips for accurately marking the ballot so every voter can be a power ranker.

# Well-designed ballots help voters avoid marking errors

When ballots are designed to best practices, voters make few if any mechanical errors marking their ballots and can focus their attention on making and ranking their choices.

One of the more striking findings throughout the entire best practices research was confirmed in these studies. In both Denver and Portland, the total of 134 participants made no errors marking over 400 ballots. We found no errors that would affect how a ballot is counted, including marking too many candidates in a rank, skipping ranks, or emphasis voting (ranking a candidate more than once).

#### Recommendations

Design ballots to best practices

- Good layout and clear instructions affect voters success in marking their ballots, irrespective of the number of ranking choices they faced.
- Incorporating best design practices instills confidence in voters that they voted as intended, and that their vote will count.
  - Use typography to make the ballot easy to read.
  - Use visual design to attract attention and separate contests.
  - Put instructions where people need them.
  - Use informational icons and typography for emphasis.
  - Use illustrations with text instructions for how to mark a ranked choice ballot.

## Before you decide checklist

In	your jurisdiction
	Is ranked choice voting new to your voters?
	Is your choice for ranked choice layout similar to what voters already know, or a new design?
	Does the election code allow flexibility in the number of ranks?
Do	oes the ballot
	Use best practices for design and layout, including text size and spacing around all contests?
	Have good instructions for ranking, placed immediately before the first ranked choice contest?
	Offer between 5 and 8 rankings (if a grid-style layout)?
Do	oes your voter education include
	Information about how ranked choice ballots are counted as wel as how to mark the ballot?
	Information that makes it clear that voters can rank as many or as few candidates as they want?
	Information for poll workers to give or read to voters at the polling place?
	Opportunities to practice voting in mock elections?
	Power tips for effective accurate ranking?

## About the research

A summary of the usability tests behind this report.

The full reports are available on our website:

https://civicdesign.org/projects/rcv/

## About the usability tests

Both tests mixed observations of voters as they marked ballots, an analysis of how the ballots were marked, and preference data and interviews with the participants.

#### Denver

- 112 participants in community centers in downtown Denver in December 2017
- Participants were given a voter guide and brief information about the mock candidates before marking three styles of ballot layout:
   3-column optical scan, grid, hand-written
- After marking the ballot, they completed a questionnaire about their reactions to the different layouts
- The session ended with a brief interview about their experience

#### Portland, Maine

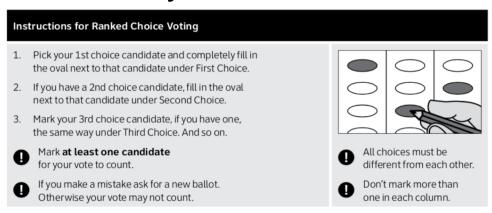
- 22 participants recruited after voting in a primary election with ranked choice voting in downtown Portland in June 2018
- Participants were observed as they marked three grid ballots with different numbers of ranking opportunities
- Ballots were based on the real election with a second fake-names contest and had two styles of ballot instructions
- The session ended with a brief interview about their experience and their thoughts about voting using ranked choice voting

## Two styles of ballot instructions

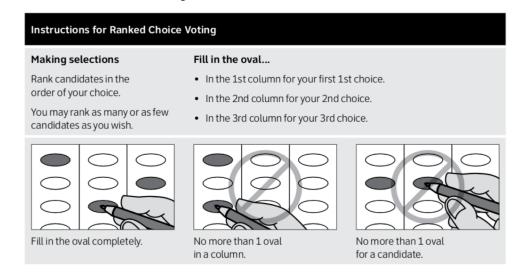
Both instruction styles had been used during the earlier studies. There were no differences in voter preferences. All liked having illustrations and clear instructions.

- Both filled the entire width of the ballot above the first ranked choice contest.
- Both work for either grid or 3-column ballot styles.

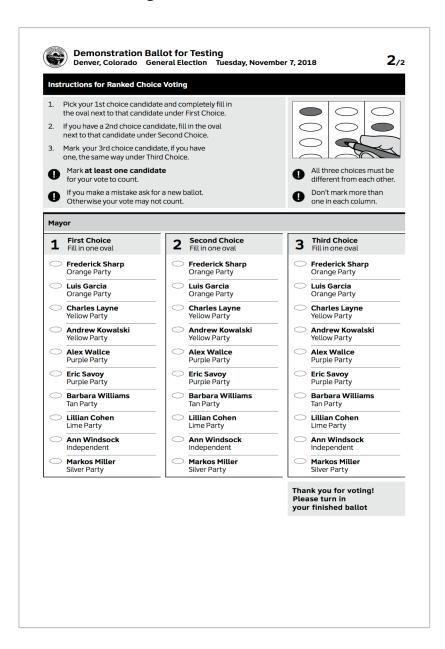
## Instruction style A



## Instruction style B



## Ballot layouts Denver - 3 columns



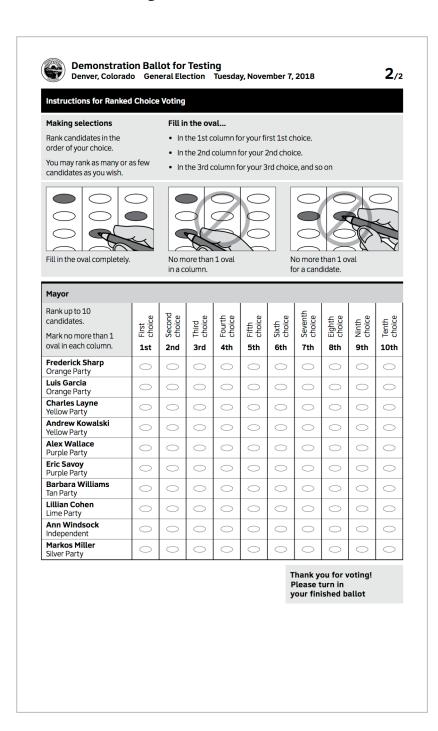
Voters in Denver were already familiar with a 3-column optical scan ballot, so this layout was easy for them to understand.

44% found this style the easiest; only 15% ranked it as the hardest to use.

It also matched the preferences of the 58% who wanted to rank 1-3 candidates.

When using this ballot style, 96% used all 3 ranks

## **Ballot layouts Denver - Grid**

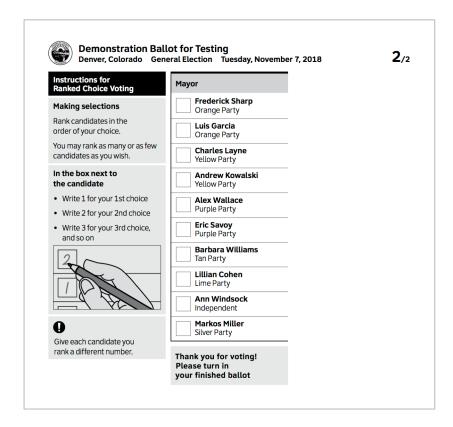


In the testing in Denver, 65% found this the style the hardest to use vs. just 21% who found it the easiest.

Novice rankers can be easily overwhelmed by a large grid like the one we used for this test.

However, this ballot also allows the largest number of rankings, and 54% of the voters ranked all 10 candidates.

## Ballot layouts Denver - handwritten



This ballot style was the least polarized, with 34% finding it easiest, and only 20% finding it hardest.

It also produced the least range in the number of rankings: 46% ranked 3; 36% ranked 10.

But, it was also the least familiar and voters worried about whether a hand-written ballot would be counted accurately.

## Ballot layouts Maine - Governor (D)

Governor			
Rank up to 3 candidates. Mark no more than 1 oval in each column.	1st Chalce	puopep Chalce 2nd	3rd choice
A dam Roland Cote	0	0	0
Donna J. Dion	0	0	0
Mark N. Dion	0	0	0
MarkW. Eves	0	0	0
Janet T. Mills	0	0	0
Diane Marie Russell	0	0	0
Elizabeth A. Sweet	0	0	0
Write-in			

Rank up to 5 candidates. Mark no more than 1 oval in each column.	1st	Second 2nd	3rd Golde	4th	£ 6 5th
Adam Roland Cote	0	0	0	0	0
Donna J. Dion	0	0	0	0	0
Mark N. Dion	0	0	0	0	0
Mark W. Eves	0	0	0	0	0
Janet T. Mills	0	0	0	0	0
Diane Marie Russell	0	0	0	0	0
Elizabeth A. Sweet	0	0	0	0	0
Write-in	0	0	0	0	0

Rank up to 8 candidates. Mark no more than 1 oval in each column.	1st	Second Chalce 2nd	3rd Choice	4th	Piff Choice	Sodh choice	th choice	8th choice
Adam Roland Cote	0	0	0	0	0	0	0	0
Donna J. Dion	0	0	0	0	0	0	0	0
Mark N. Dion	0	0	0	0	0	0	0	0
Mark W. Eves	0	0	0	0	0	0	0	0
Janet T. Mills	0	0	0	0	0	0	0	0
Diane Marie Russell	0	0	0	0	0	0	0	0
Elizabeth A. Sweet	0	0	0	0	0	0	0	0
Write-in	0	0	0	0	0	0	0	0

Participants were given ballots matching their party preference.

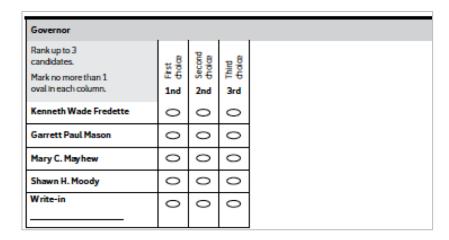
The Democratic
Primary ballots used
real names for 7
candidates + a writein for Governor

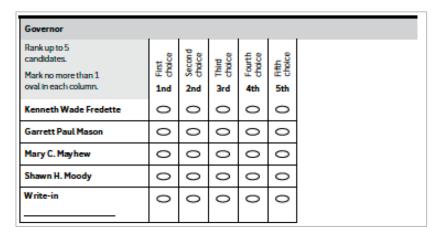
The ballots offered opportunities to rank 3 candidates 5 candidates 8 (all) candidates

A second contest for City Council (not shown) had 6 candidates and 3 write-ins in a votefor-3 contest.

Both the contest and the names were fake.

## Ballot layouts Maine – Governor (R)





Participants were given ballots matching their party preference.

The Republican
Primary ballots had 4
candidates for
Governor.

The ballots offered opportunities to rank 3 candidates 5 (all) candidates

There were too few candidates for an option for more rankings.

## **Ballot layouts Maine – City Council (R)**

City Council — 3 candi	dates	vill wir							
Rankupto 3									
candidates.	First	Second	Third						
Mark no more than 1 oval in each column.	1st	2nd	F+5						
Harvey Smith	0	0	0						
Randle Eagle	0	0	0						
Reid Davis	0	0	0						
Barbara Shry	0	0	0						
Carole Barker	0	0	0						
Hugh Feiser	0	0	0						
Charles Qualey	0	0	0						
George Strickfadden	0	0	0						
Whitney Appleby	0	0	0						
Write-in	0	0	0						
Write-in	0	0	0						
	_	0	0						
Write-in									
Write-in	0	)							
City Council — 3 candi						1			
	dates v	vill wir	1	th ice	. 80				
City Council — 3 candi Rank up to 5 candidates. Mark no more than 1				Fourth	Fifth				
City Council — 3 candi Rank up to 5 candidates.	dates v	vill wir	1	th choice	Sth Choice				
City Council — 3 candi Rank up to 5 candidates. Mark no more than 1	Hist choice	Second choice	Third		_				
City Council — 3 candi Rank up to 5 candidates. Mark no more than 1 oval in each column.	dates v	vill wir	Third choice	4th	5th				
City Council — 3 candi Rank up to 5 candidates. Mark no more than 1 oval in each column. Harvey Smith	dates v	second choice 2nd	3rd O	4th	5th				
City Council — 3 candi Rank up to 5 candidates. Mark no more than 1 oval in each column. Harvey Smith Randle Eagle	datesv Hust Choice	Paccount Second 2nd	O O choice	4th 0	5th ()				
City Council — 3 candi Rank up to 5 candidates. Mark no more than 1 oval in each column. Harvey Smith Randle Eagle	dates v	Paccoud Choice 2nd	and O O O	<b>4</b> 0 0 0	5th ()				
City Council — 3 candi Rank up to 5 candidates. Mark no more than 1 oval in each column. Harvey Smith Randle Eagle Reid Davis Barbara Shry	datesv tel description of the control of the contro	2nd O	O O O Choice	<b>4</b> 0 0 0 0	55 0 0 0 0				
City Council — 3 candi Rank up to 5 candidates. Mark no more than 1 oval in each column. Harvey Smith Randle Eagle Reid Davis Barbara Shry Carole Barker	dates v	vill wir	0 0 0 0 ptg Third	<b>4</b> 0 0 0 0 0	s 0 0 0 0 0				
City Council — 3 candi Rank up to 5 candidates.  Mark no more than 1 oval in each column.  Harvey Smith  Randle Eagle  Reid Davis  Barbara Shry  Carole Barker  Hugh Feiser	datesv lst 0 0 0 0	mill will will will will will will will	0 0 0 0 % Third	<b>4</b> 0 0 0 0 0 0	± 0 0 0 0 0 0				
City Council— 3 candi Rank up to 5 candidates. Mark no more than 1 oval in each column. Harvey Smith Randle Eagle Reid Davis Barbara Shry Carole Barker Hugh Feiser Charles Qualey George Strickfadden Whitney Appleby	1st 0 0 0 0 0	2nd 0 0 0 0 0	0 0 0 0 0 m Third	<b>4</b> 0 0 0 0 0 0 0	st 0 0 0 0 0 0 0				
City Council— 3 candi Rank up to 5 candidates. Mark no more than 1 oval in each column. Harvey Smith Randle Eagle Reid Davis Barbara Shry Carole Barker Hugh Feiser Charles Qualey George Strickfadden Whitney Appleby	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	vill wird wird wird wird wird wird wird wird	0 0 0 0 0 m Third	<b>\$</b> 0 0 0 0 0 0 0 0	<b>s</b> 0 0 0 0 0 0 0 0 0				
City Council — 3 candi Rankup to 5 candidates. Mark no more than 1 oval in each column. Harvey Smith Randle Eagle Reid Davis Barbara Shry Carole Barker Hugh Feiser Charles Qualey George Strickfadden	dates v   date	will wir 2 purcus 2 p	0 0 0 0 0 0 % Third	<b>\$</b> 0 0 0 0 0 0 0 0 0	<b>s</b> 0 0 0 0 0 0 0 0 0 0				
City Council — 3 candi Rankup to 5 candidates. Mark no more than 1 oval in each column. Harvey Smith Randle Eagle Reid Davis Barbara Shry Carole Barker Hugh Feiser Charles Qualey George Strickfadden Whitney Appleby Write-in	dates v 1910 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 nd 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<b>\$</b> 0 0 0 0 0 0 0 0 0 0 0	5 0 0 0 0 0 0 0 0 0 0 0				
City Council — 3 candi Rank up to 5 candidates. Mark no more than 1 oval in each column. Harvey Smith Randle Eagle Reid Davis Barbara Shry Carole Barker Hugh Feiser Charles Qualey George Strickfadden Whitney Appleby Write-in	dates v   1st   0   0   0   0   0   0   0   0   0	2 nd 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 8 Third	<b>\$</b> 0 0 0 0 0 0 0 0 0 0 0	5 0 0 0 0 0 0 0 0 0 0 0				

City Council — 3 candid	lates v	vill wir	1									
Rank up to 12 candidates.  Mark no more than 1 oval in each column.	Prst choice	apioco Quoido	Third choice	Fourth choice	Egg Cholos	Skth choice	Seventh choice	Bahth diolog	Ninth cholop	10th	Eleventh choice	Welfth choice
OF ATT COLOR COLOR CO.	ıst	Zna	sra	4th	otn	otn	rtn	stn	9th	10th	11th	12th
Harvey Smith	0	0	0	0	0	0	0	0	0	0	0	0
Randle Eagle	0	0	0	0	0	0	0	0	0	0	0	0
Reid Davis	0	0	0	0	0	0	0	0	0	0	0	0
Barbara Shry	0	0	0	0	0	0	0	0	0	0	0	0
Carole Barker	0	0	0	0	0	0	0	0	0	0	0	0
Hugh Feiser	0	0	0	0	0	0	0	0	0	0	0	0
Charles Qualey	0	0	0	0	0	0	0	0	0	0	0	0
George Strickfadden	0	0	0	0	0	0	0	0	0	0	0	0
Whitney Appleby	0	0	0	0	0	0	0	0	0	0	0	0
Write-in	0	0	0	0	0	0	0	0	0	0	0	0
Write-in	0	0	0	0	0	0	0	0	0	0	0	0
Write-in	0	0	0	0	0	0	0	0	0	0	0	0

The second contest for City Council had 9 candidates and 3 write-ins in a votefor-3 contest.

Both the contest and the names were fake.

The ballots offered opportunities to rank 3 candidates 5 candidates 8 (all) candidates

## Usability test your election materials

## What is usability testing?

Usability testing is a tool for learning where people interacting with a design encounter frustration. It's simple: You watch and listen to people who are like your users as they use a design as they normally would.

## Why conduct usability testing?

What's easy to us may not be easy for other people. The only way to know for sure is observing how other people use and understand your ballots and other materials. Testing ballots (before the printing deadline) can let you check the instructions and layout.

Usability testing is also a chance to test your instructions, voter guides, outreach and education material, and other election materials to be sure they work together to inform voters.

## How to conduct usability testing

- Our Field guide about <u>Testing ballots for usability</u> also applies to voter registration forms, screens and instructions.
- Also check out the <u>Usability testing tookit</u> from the Election Toolkit.

## We can help.

Center for Civic Design works with election officials, motor vehicle departments and advocates to conduct and coach usability testing. Interested? Send us a note at hello@civicdesign.org



hello@civicdesign.org civicdesign.org @civicdesign