

USEIT

Use,
Support,
and
Effect
of
Instructional
Technology
Study

report eight

Teachers' Beliefs About Vision and Leadership

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Teachers' Beliefs About Vision and Leadership

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Use, Support, and Effect of Instructional Technology Study

Use, Support, and Effect of Instructional Technology (USEIT)

Report 8

Teachers' Beliefs About Vision and Leadership

The Use, Support, and Effect of Instructional Technology (USEIT) Study employed common data collection methods across the 22 Massachusetts school districts to document the effects district-level technology support structures have on teaching and learning. Among several specific questions addressed in this study are the following:

- How and to what extent are teachers and students using technology in and out of the classroom?
- How much influence does district leadership, shared vision, provision of resources, and technical support have on the ways in which and extent to which teachers use technology for instructional purposes?
- How do different approaches to professional development impact instructional uses of technology?

During the 2001-2002 school year, information about district technology programs, teacher and student use of technology in and out of the classroom, and factors that influence these uses was collected through site visits, interviews, and surveys. In total, survey responses were obtained from 120 district-level administrators, 122 principals, 4,400 teachers, and 14,200 students in grades five, eight, and eleven. In addition, over 400 interviews with district leaders, principals, and technology specialists were conducted. And, during the 2002-2003 school year, four case studies and a study focusing on the relationship among student use of technology and academic performance are being conducted.

This report presents descriptive results of the surveys administered to teachers of mathematics, English language arts, science, and social studies in lower grades (K-5), middle grades (6-8), and upper grades (9-12). Some schools that participated in the survey are structured with Grade 6 in the "lower grade" school or Grade 9 in the "middle grade" school. In these cases, Grade 6 is grouped with the lower grade data and Grade 9 is grouped with the middle grade data. The purposes of this report are to familiarize readers with the data collected from teachers and to describe teachers' beliefs about leadership, vision, and goals. In total, 2,894 mathematics, English language arts, science, and social studies teachers responded to this survey. Note that special education teachers and specialists (e.g., physical education teachers, art teachers) are not included in this analysis. The findings presented in this report focus on the following issues related to teacher use of technology in school:

- Role of Technology in Overall Education Program
- Awareness of the School/Districts' Technology Vision
- Beliefs About the Focus of Technology Standards
- Beliefs About Technology and Leadership
- Beliefs About Who Controls the Curriculum
- Beliefs About School/Districts' Technology Vision
- Beliefs About Shaping Teacher Computer Use in the Classroom

Note that for each item presented in this report, an analysis of variance (ANOVA) was performed to test for statistically significant differences across grade levels. Where appropriate, post-hoc comparisons were performed using Tukey's HSD method of adjusting alpha for multiple comparisons. For all references to statistically significant differences, alpha was equal to or less than 0.01.

Major Findings

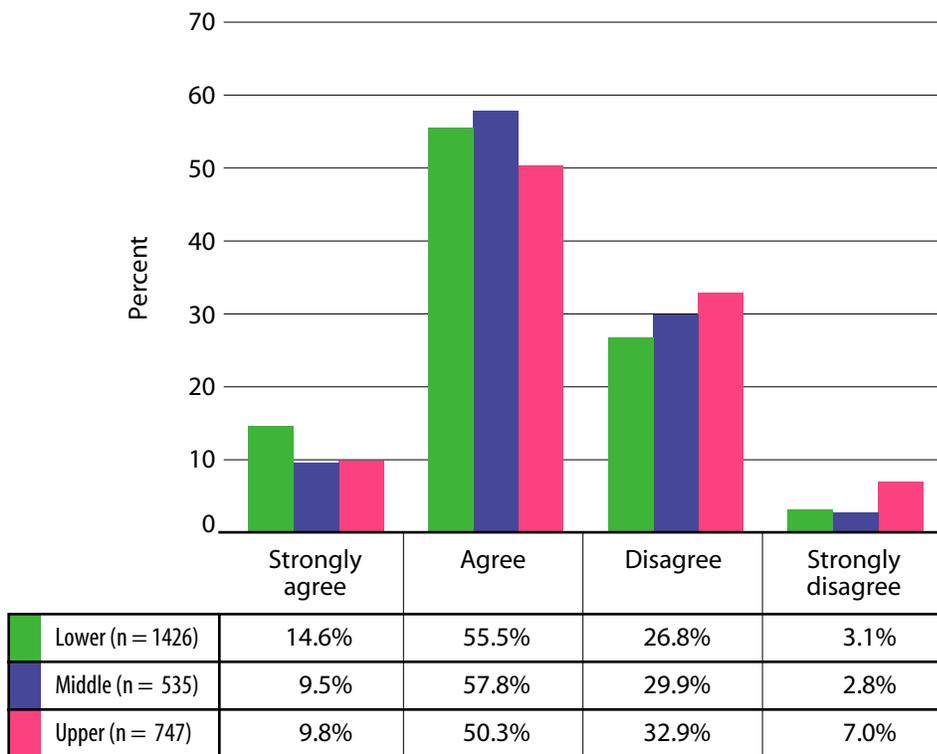
- Across all three grade levels, the majority of teachers agreed that in their districts technology is an integral part of the overall education program. A higher percentage of lower grade teachers as compared to upper grade teachers reported that they believe that technology is an integral part of the overall education program.
- Teachers reported that they are “somewhat aware” of their school/districts’ technology vision. There were significant differences in responses to this item across all three grade levels. Lower grade teachers reported that they are more aware of their school/districts’ vision for the use of technology in their classrooms, while upper grade teachers reported that they are less aware of their school/districts’ vision for the use of technology in their classrooms.
- Lower grade and middle grade teachers reported that their department head puts the least amount of emphasis on technology while their superintendent or assistant superintendent places the most amount of emphasis on technology. Upper grade teachers reported that their principals place the least amount of emphasis on technology and that teachers themselves place the most amount of emphasis on technology.
- Across all three grade levels, teachers reported that there is more district control of the curriculum today than there was five years ago. Upper grade teachers were more likely than lower grade and middle grade teachers to report that there is teacher flexibility in developing the curriculum both today and 5 years ago.
- Teachers reported that the 14 classroom-related elements in the survey are more important factors in their school/districts’ technology vision than they are in shaping their use of technology in their own classrooms.
- Lower grade and middle grade teachers reported that increasing teachers’ proficiency in using technology is the most important element in their school/districts’ technology vision and in shaping their own use of technology. Upper grade teachers reported that using technology to improve classroom instruction is the most important element in the school/districts’ technology vision and improving teacher productivity and efficiency is the most important element in shaping their own use of technology.

Role of Technology in Overall Education Program

Figure 1 provides information about how much teachers agreed that in their districts technology is an integral part of the overall education program. Across all three grade levels, the majority of teachers agreed that technology is an integral part of the overall education program in their districts. Between 9.5% and 14.6% of teachers strongly agreed, between 50.3% and 57.8% agreed, between 26.8% and 32.9% disagreed, and between 2.8% and 7.0% strongly disagreed. A significantly higher percentage of lower grade teachers as compared to upper grade teachers indicated agreement with the statement that technology is an integral part of the overall education program in their districts.

Figure 1: The following statements describe a teacher's work environment. Please indicate how much each statement agrees or disagrees with your own situation:

In my district, technology is an integral part of the overall education program.



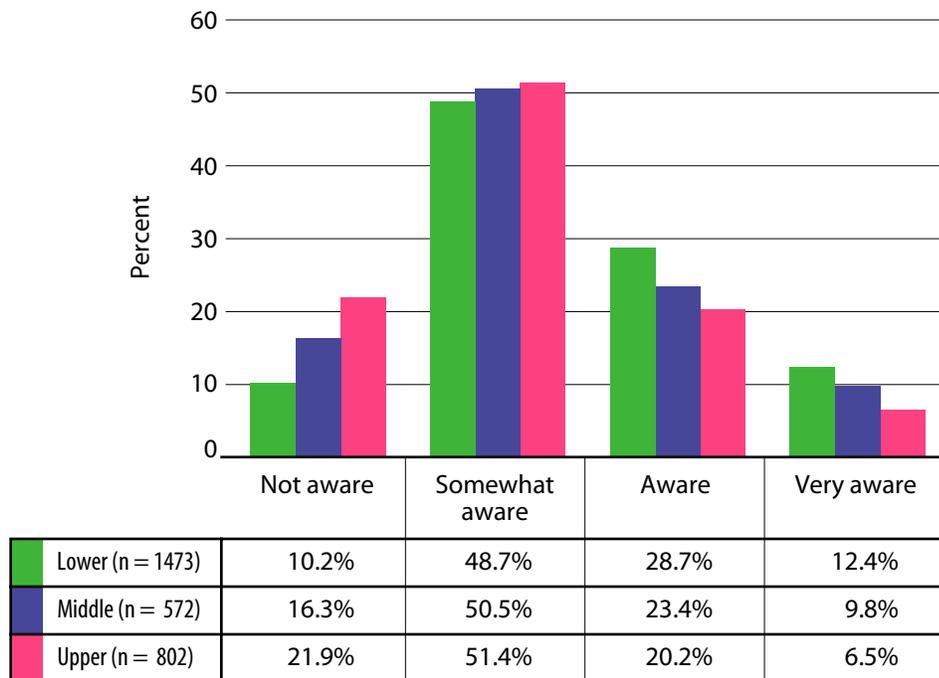
Awareness of the School/Districts' Technology Vision

Figure 2 provides information about teachers' reports of how aware they are of their school/districts' vision for the use of technology in their classes. The four response options were the following:

- not aware: *I am not sure of the vision;*
- somewhat aware: *I have a sense of where we're headed, but not aware of formal plans;*
- aware: *I am familiar with the vision;*
- very aware: *I am very familiar with the vision.*

Between 10.2% and 21.9% of teachers reported that they are not aware of their school/districts' technology vision, between 48.7% and 51.4% reported that they are somewhat aware of their school/districts' technology vision, between 20.2% and 28.7% reported that they are aware of their school/districts' technology vision, and between 6.5% and 12.4% reported that they are very aware of their school/districts' technology vision. There were significant differences in responses across all three grade levels. Lower grade teachers reported that they are more aware of their school/districts' vision for the use of technology in their classrooms, while upper grade teachers reported that they are less aware of their school/districts' vision for the use of technology in their classrooms.

Figure 2: How aware are you of your school/district's vision for the use of technology in your classes?

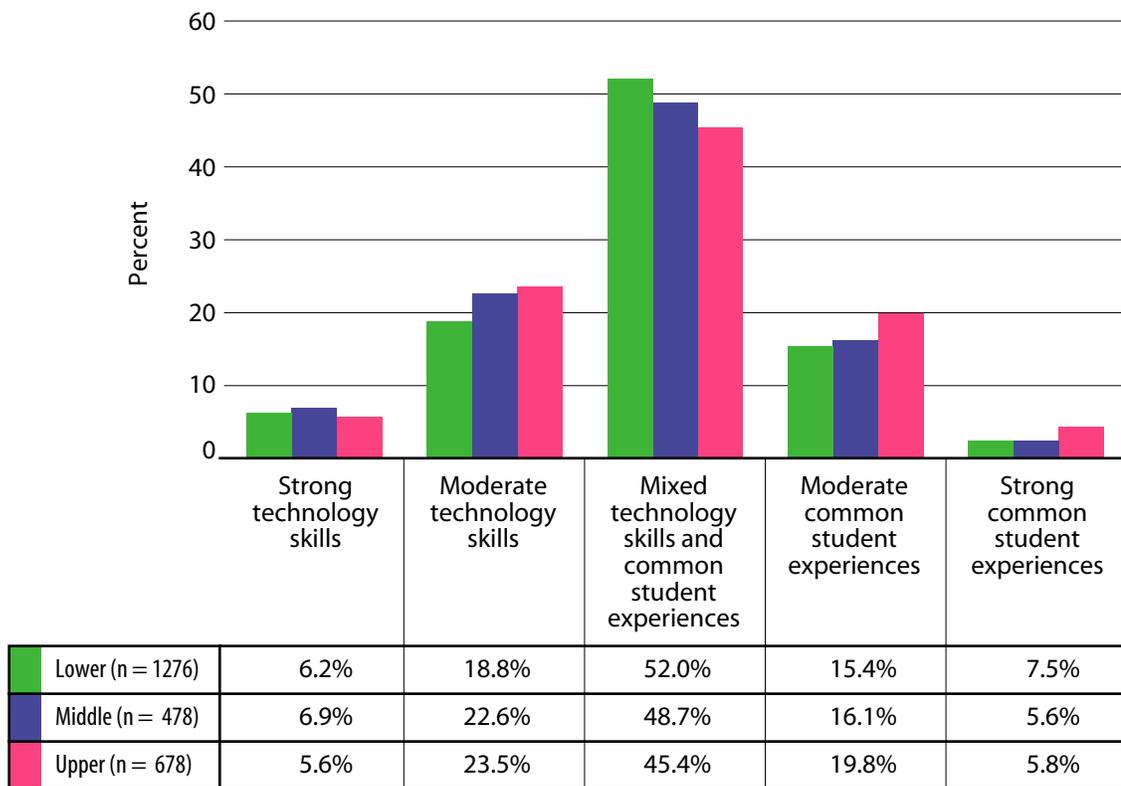


Beliefs About the Focus of Technology Standards

Figure 3 provides information about whether teachers reported that their technology standards are focused on developing students' computer proficiency and software skills or focused on guaranteeing that all students receive common experiences that require them to use technology to learn specific aspects of a subject area curriculum. There were five response options for this question that ranged on a scale between "technology proficiency and skills" and "common student experiences."

Between 5.6% and 6.9% of teachers reported that their technology standards strongly focus on technical skills, between 18.8% and 23.5% reported that their technology standards moderately focus on technical skills, between 45.4% and 52.0% reported that their technology standards are mixed and focus on both technical skills and common student experiences, between 15.4% and 19.8% reported that their technology standards moderately focus on common student experiences, and between 5.6% and 7.5% reported that their technology standards strongly focus on common student experiences. There were no significant differences in responses across grade levels.

Figure 3: In some districts, technology standards focus on the development of student's computer proficiency and software skills. In other districts, technology standards strive to guarantee that all students receive common experiences that require them to use technology to learn specific aspects of a subject area curriculum. Select where the greatest focus of your districts technology standards is:



Beliefs About Technology and Leadership

This section presents results for four items that asked teachers to indicate how much emphasis each of the following people place on technology: superintendent or assistant superintendent, principal, department head, and themselves. The four possible responses were the following: heavy emphasis, some emphasis, little emphasis, or no emphasis.

Figure 4 provides information about how much emphasis teachers reported that their superintendent or assistant superintendent places on technology. Across all three grade levels, the majority of teachers reported that their superintendent or assistant superintendent places some emphasis on technology. Between 24.5% and 35.2% of teachers reported that their superintendent or assistant superintendent places heavy emphasis on technology, between 54.0% and 56.0% reported their superintendent or assistant superintendent places some emphasis on technology, between 8.8% and 15.9% reported that their superintendent or assistant superintendent places little emphasis on technology, and between 2.0% and 5.1% reported that their superintendent or assistant superintendent places no emphasis on technology. A higher percentage of lower grade and middle grade teachers as compared to upper grade teachers reported that their superintendent or assistant superintendent places heavy emphasis on technology.

**Figure 4: How much emphasis do each of the following people place on technology?
Your Superintendent or Assistant Superintendent**

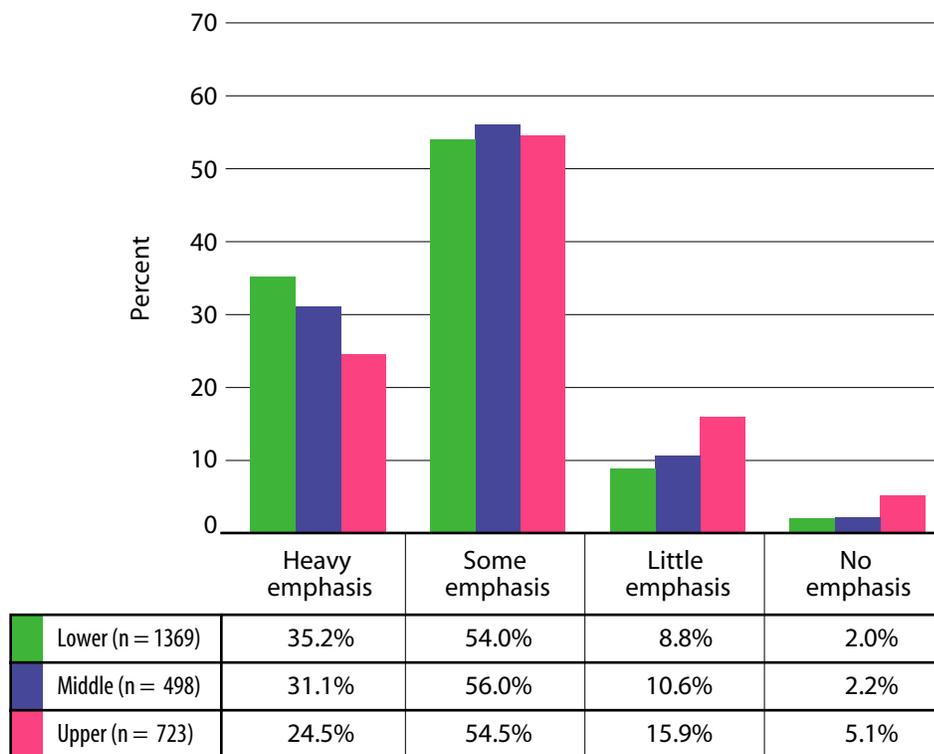


Figure 5 provides information about how much emphasis teachers reported that their principal places on technology. Across all three grade levels, the majority of teachers reported that their principal places some emphasis on technology. Between 20.1% and 27.0% of teachers reported that their principal places heavy emphasis on technology, between 56.6% and 60.1% reported their principal places some emphasis on technology, between 11.3% and 17.4% reported that their principal places little emphasis on technology, and between 1.6% and 3.8% reported that their principal places no emphasis on technology. A significantly higher percentage of lower grade teachers as compared to upper grade teachers reported that their principal places heavy emphasis on technology.

Figure 5: How much emphasis do each of the following people place on technology?

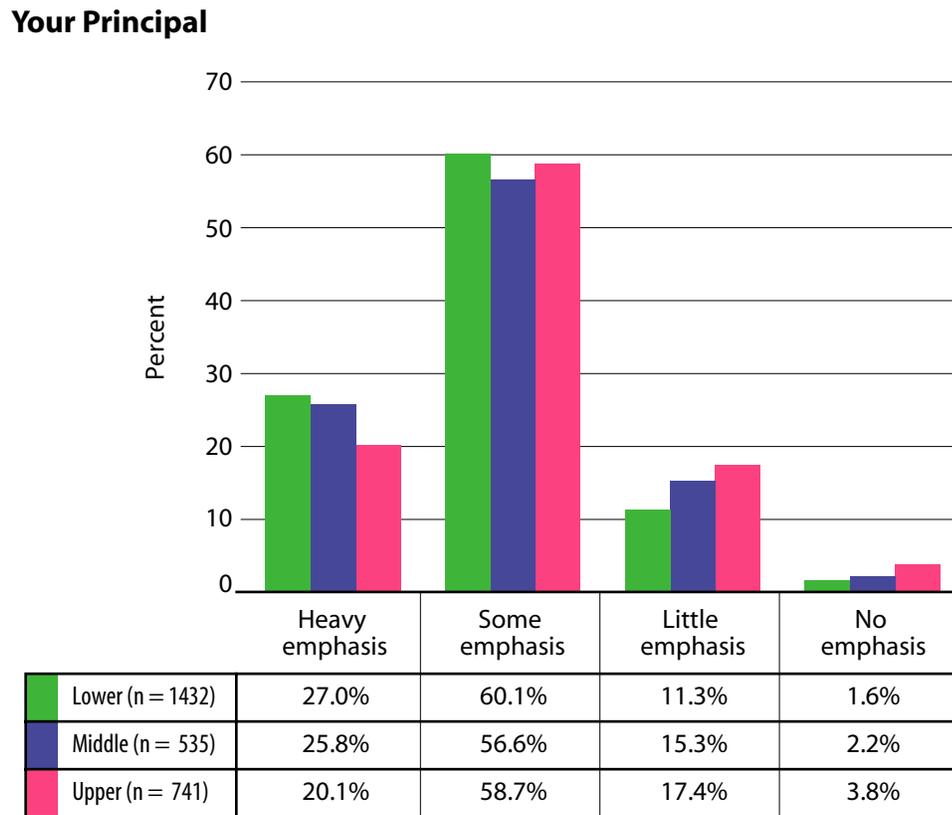


Figure 6 provides information about how much emphasis teachers reported that their department head places on technology. Across all three grade levels, the majority of teachers reported that their department head places some emphasis on technology. Between 13.8% and 22.1% of teachers reported that their department head places heavy emphasis on technology, between 52.9% and 58.0% reported their department head places some emphasis on technology, between 15.4% and 24.8% reported that their department head places little emphasis on technology, and between 4.5% and 9.3% reported that their department head places no emphasis on technology. A higher percentage of lower grade and middle grade teachers as compared to upper grade teachers reported that their department head places no emphasis on technology.

Figure 6: How much emphasis do each of the following people place on technology?

Your Department Head

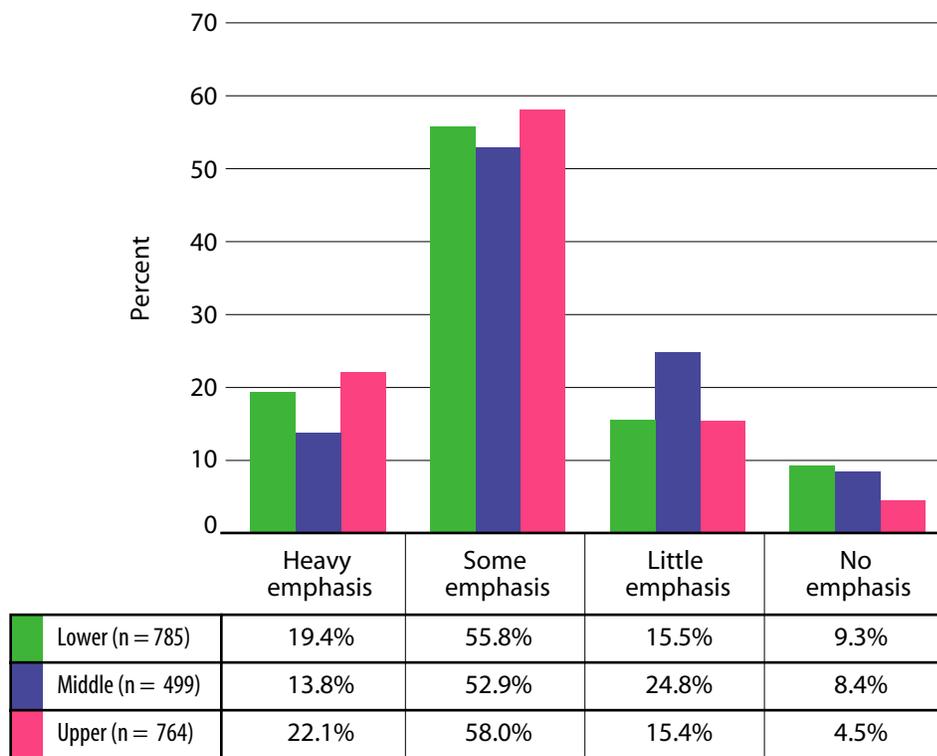


Figure 7 provides information about how much emphasis teachers reported that they themselves place on technology. Across all three grade levels, the majority of teachers reported that they themselves place some emphasis on technology. Between 18.1% and 24.6% of teachers reported that they themselves place heavy emphasis on technology, between 55.8% and 63.1% reported that they themselves place some emphasis on technology, between 15.8% and 17.0% reported that they themselves place little emphasis on technology, and between 1.8% and 2.9% reported that they themselves place no emphasis on technology. There were no significant differences in responses across grade levels.

**Figure 7: How much emphasis do each of the following people place on technology?
Yourself**

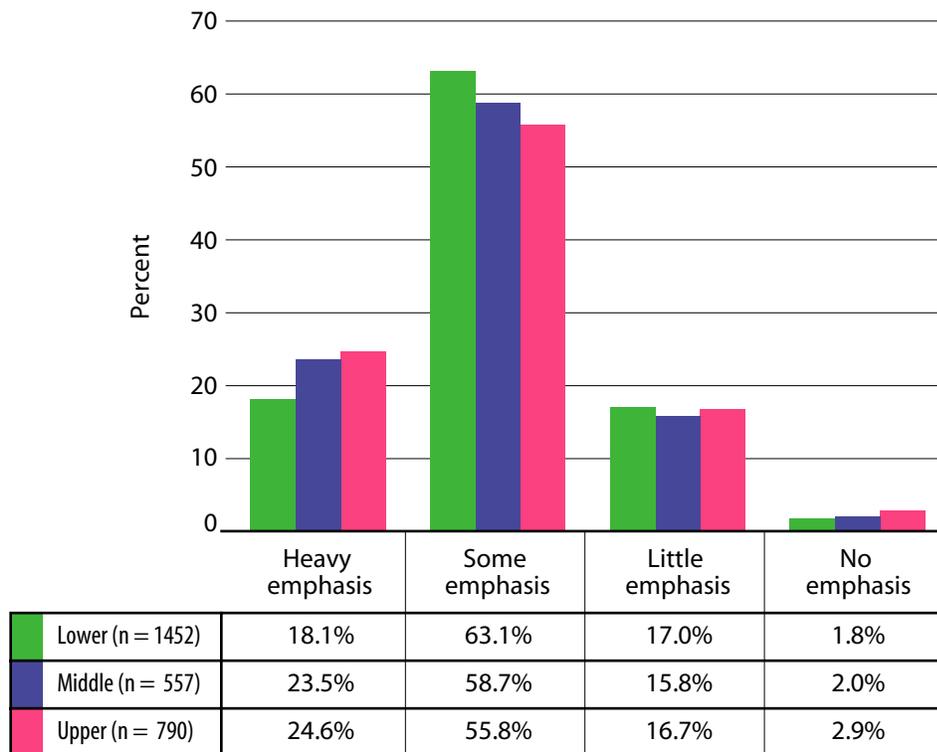
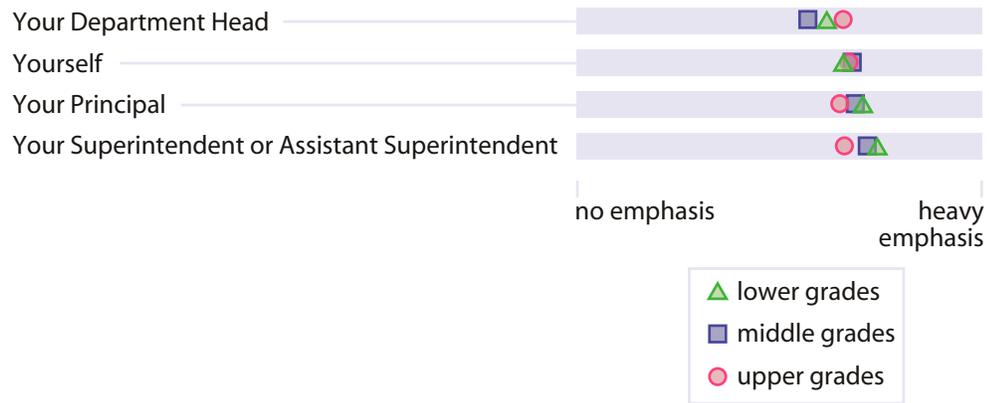


Figure 8 summarizes teacher responses to the four items that asked teachers to indicate how much emphasis they and district personnel place on technology. Based on the average score of teachers' responses, lower grade and middle grade teachers reported that their department heads place the least emphasis on technology while they reported that their superintendents or assistant superintendents place the most emphasis on technology. Upper grade teachers reported that their principals place the least emphasis on technology and that they place the most emphasis on technology themselves.

Figure 8: Summary of Teachers' Beliefs About Emphasis That District and School Personnel Place on Technology



Beliefs About Who Controls the Curriculum

Figure 9 provides information about whether teachers reported that their curriculum is currently controlled at the classroom level or at the district level. There were five response options for this question that ranged on a scale between “teacher flexibility” and “district control.” Between 4.7% and 13.6% of teachers reported that there is strong teacher flexibility, between 9.3% and 23.8% reported that there is moderate teacher flexibility, between 28.1% and 30.5% reported that there is a mix between teacher flexibility and district control, between 22.9% and 29.5% reported that there is moderate district control, and between 9.2% and 28.3% reported that there is strong district control. There were significant differences in responses across all three grade levels. A significantly higher percentage of lower grade teachers as compared to middle grade and upper grade teachers reported that there is district control of the curriculum and a significantly higher percentage of upper grade teachers as compared to lower grade and middle grade teachers reported that there is teacher flexibility in controlling the curriculum.

Figure 9: In some schools, the general curriculum is developed within each separate classroom. In others schools the district develops the curriculum.

Where does your school fit today?

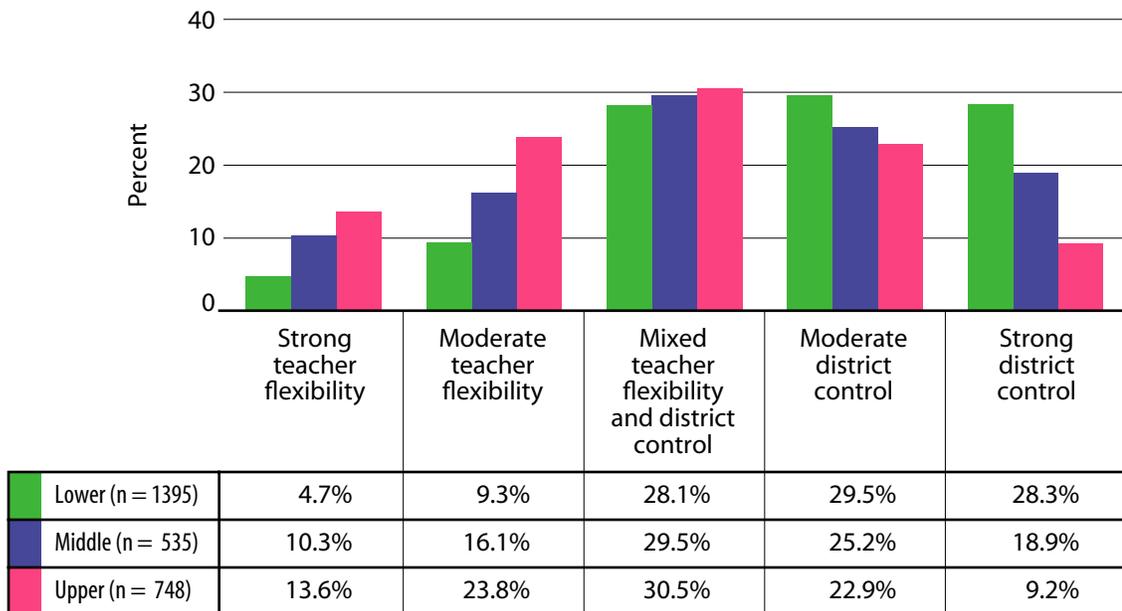


Figure 10 provides information about whether teachers reported that 5 years ago their curriculum was controlled at the classroom level or at the district level. There were five response options for this question that ranged on a scale between “teacher flexibility” and “district control.” Between 24.9% and 31.7% of teachers reported that there was strong teacher flexibility, between 24.7% and 27.4% reported that there was moderate teacher flexibility, 26.0% at each level reported that there was a mix between teacher flexibility and district control, between 8.0% and 12.4% reported that there was moderate district control, and between 6.8% and 12.0% reported that there was strong district control. A significantly higher percentage of upper grade teachers as compared to lower grade teachers reported that there was greater teacher flexibility than district control of the curriculum 5 years ago.

Figure 10: In some schools, the general curriculum is developed within each separate classroom. In others schools the district develops the curriculum.

Where was your school 5 years ago?

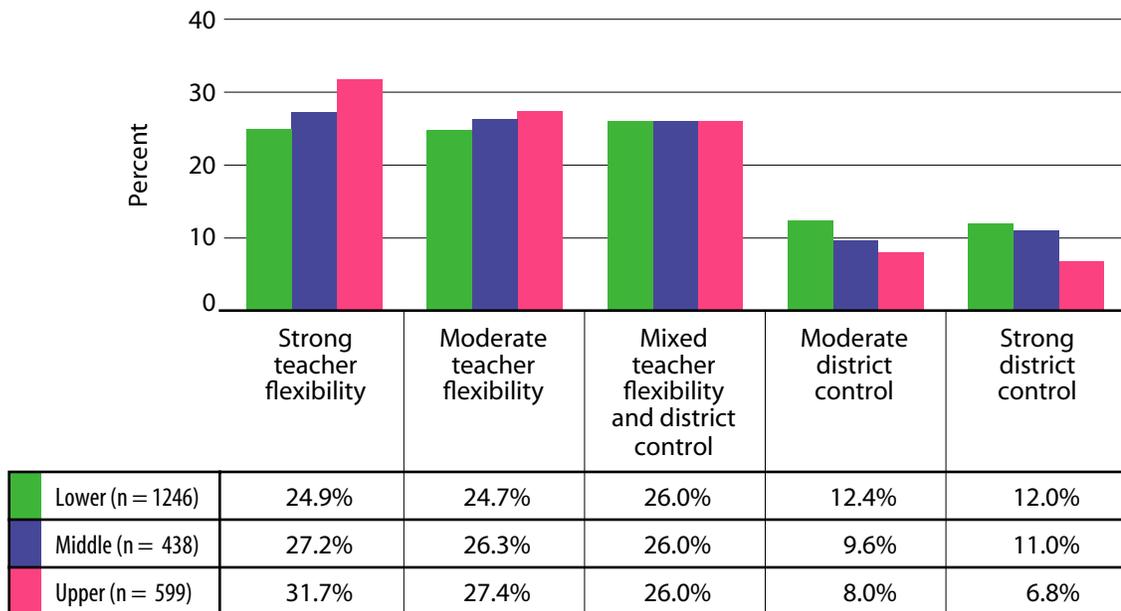
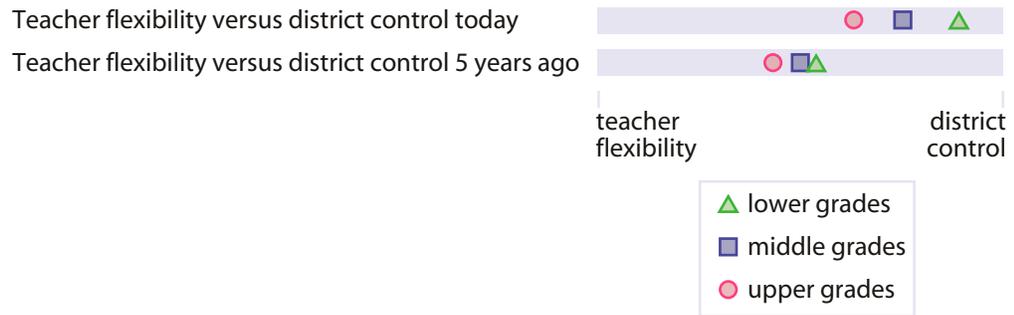


Figure 11 summarizes teacher responses to the two items that asked teachers to indicate the extent to which their curriculum is being teacher controlled versus controlled by the district both today and 5 years ago. Teachers across all three grade levels reported that there was more teacher flexibility in controlling the curriculum 5 years ago than there is today. There was less variation in teacher responses across grade levels when asked about control of the curriculum 5 years ago as compared to the teacher responses when asked about control of the curriculum today. Upper grade teachers as compared to lower grade and middle grade teachers reported that there is more teacher flexibility in developing the curriculum both today and 5 years ago.

Figure 11: Summary of Teachers' Beliefs About Teacher Versus District Controlled Curriculum



Beliefs About School/Districts' Technology Vision

This section presents results for the 14 classroom-related items that asked teachers to indicate how important each element is in their school/districts' technology vision. There were four possible responses: not important, slightly important, somewhat important, and very important.

Figure 12 provides information about how important teachers believe using technology to improve classroom instruction is in their school/districts' technology vision. Across all three grade levels, the vast majority of teachers reported that using technology to improve classroom instruction is either very important or somewhat important in their school/districts' technology vision. Between 49.7% and 58.4% of teachers reported that using technology to improve classroom instruction is very important in their school/districts' technology vision, between 31.6% and 33.7% reported that using technology to improve classroom instruction is somewhat important, between 7.8% and 12.9% reported that using technology to improve classroom instruction is slightly important, and between 2.2% and 5.8% reported that using technology to improve classroom instruction is not important in their school/districts' technology vision. A significantly higher percentage of lower grade teachers as compared to upper grade teachers reported that using technology to improve classroom instruction is very important in their school/districts' technology vision.

Figure 12: How important is each of following elements in: Your school/district's technology vision

Using technology to improve classroom instruction

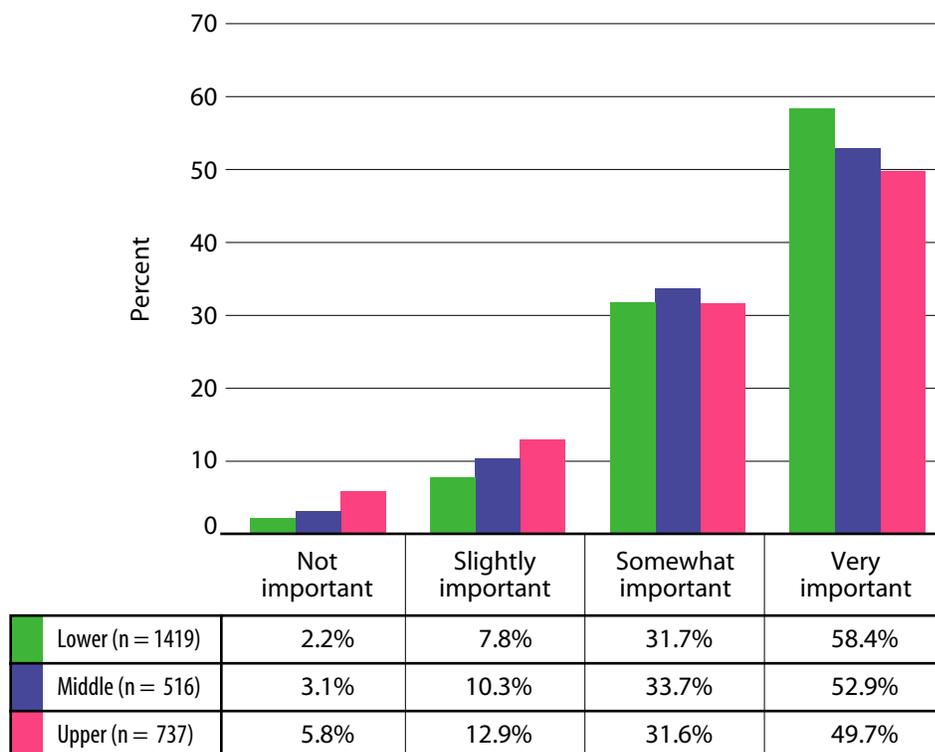


Figure 13 provides information about how important teachers believe using technology to improve student performance is in their school/districts' technology vision. Across all three grade levels, the vast majority of teachers reported that using technology to improve student performance is either very important or somewhat important in their school/districts' technology vision. Between 46.8% and 50.5% of teachers reported that using technology to improve student performance is very important in their school/districts' technology vision, between 35.4% and 35.8% reported that using technology to improve student performance is somewhat important, between 10.7% and 13.2% reported that using technology to improve student performance is slightly important, and between 3.1% and 6.1% reported that using technology to improve student performance is not important in their school/districts' technology vision. There were no significant differences in responses across grade levels.

Figure 13: How important is each of following elements in: Your school/district's technology vision

Using technology to improve student performance

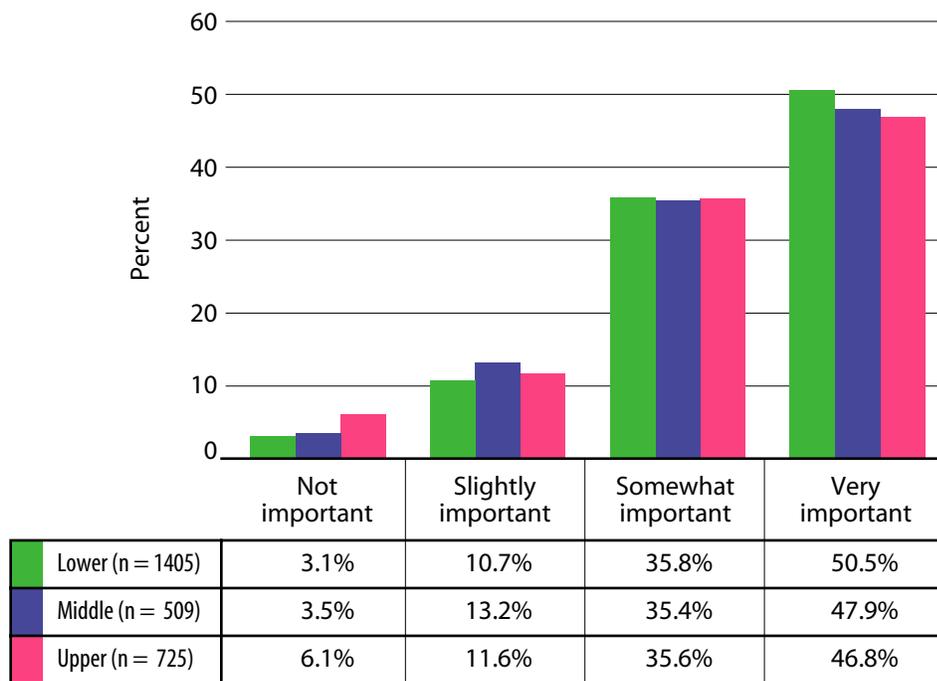


Figure 14 provides information about how important teachers believe student proficiency in teaming and collaboration is in their school/districts' technology vision. Across all three grade levels, the vast majority of teachers reported that student proficiency in teaming and collaboration is either very important or somewhat important in their school/districts' technology vision. Between 32.7% and 40.0% of teachers reported that student proficiency in teaming and collaboration is very important in their school/districts' technology vision, between 38.1% and 39.0% reported that student proficiency in teaming and collaboration is somewhat important, between 15.1% and 19.8% reported that student proficiency in teaming and collaboration is slightly important, and between 6.8% and 8.5% reported that student proficiency in teaming and collaboration is not important in their school/districts' technology vision. A significantly higher percentage of lower grade teachers as compared to upper grade teachers reported that student proficiency in teaming and collaboration is very important in their school/districts' technology vision.

Figure 14: How important is each of following elements in: Your school/district's technology vision

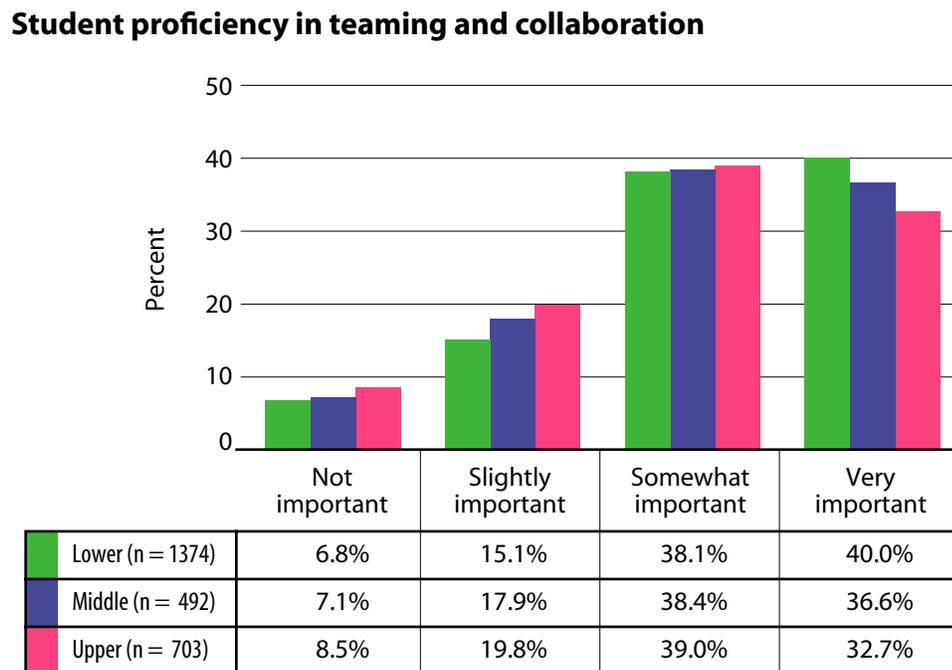


Figure 15 provides information about how important teachers believe student proficiency in data analysis is in their school/districts' technology vision. Across all three grade levels, the vast majority of teachers reported that student proficiency in data analysis is either very important or somewhat important in their school/districts' technology vision. Between 28.6% and 33.7% of teachers reported that student proficiency in data analysis is very important in their school/districts' technology vision, between 37.7% and 40.7% reported that student proficiency in data analysis is somewhat important, between 19.1% and 21.3% reported that student proficiency in data analysis is slightly important, and between 7.4% and 10.2% reported that student proficiency in data analysis is not important in their school/districts' technology vision. There were no significant differences in responses across grade levels.

Figure 15: How important is each of following elements in: Your school/district's technology vision

Student proficiency in data analysis

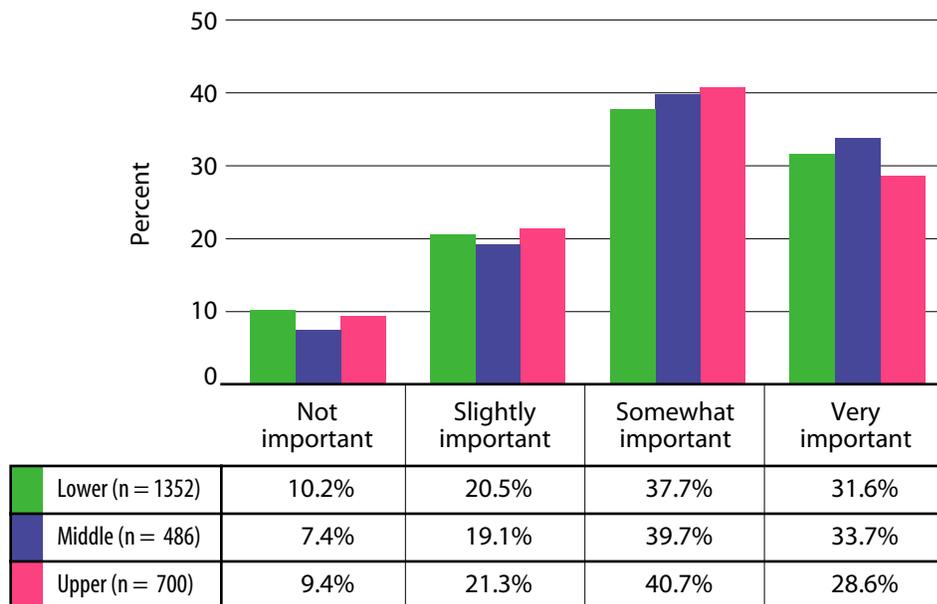


Figure 16 provides information about how important teachers believe increasing teacher proficiency in use of technology is in their school/districts' technology vision. Across all three grade levels, the vast majority of teachers reported that increasing teacher proficiency in use of technology is either very important or somewhat important in their school/districts' technology vision. Between 45.2% and 65.1% of teachers reported that increasing teacher proficiency in use of technology is very important in their school/districts' technology vision, between 26.0% and 34.0% reported that increasing teacher proficiency in use of technology is somewhat important, between 7.3% and 15.4% reported that increasing teacher proficiency in use of technology is slightly important, and between 1.6% and 5.4% reported that increasing teacher proficiency in use of technology is not important in their school/districts' technology vision. There were significant differences in responses across all three grade levels. A significantly higher percentage of lower grade teachers as compared to middle grade and upper grade teachers reported that increasing teacher proficiency in use of technology is very important in their school/districts' technology vision and a significantly higher percentage of upper grade teachers as compared to lower grade and middle grade teachers reported that increasing teacher proficiency in use of technology is not important in their school/districts' technology vision.

Figure 16: How important is each of following elements in: Your school/district's technology vision

Increasing teacher proficiency in use of technology

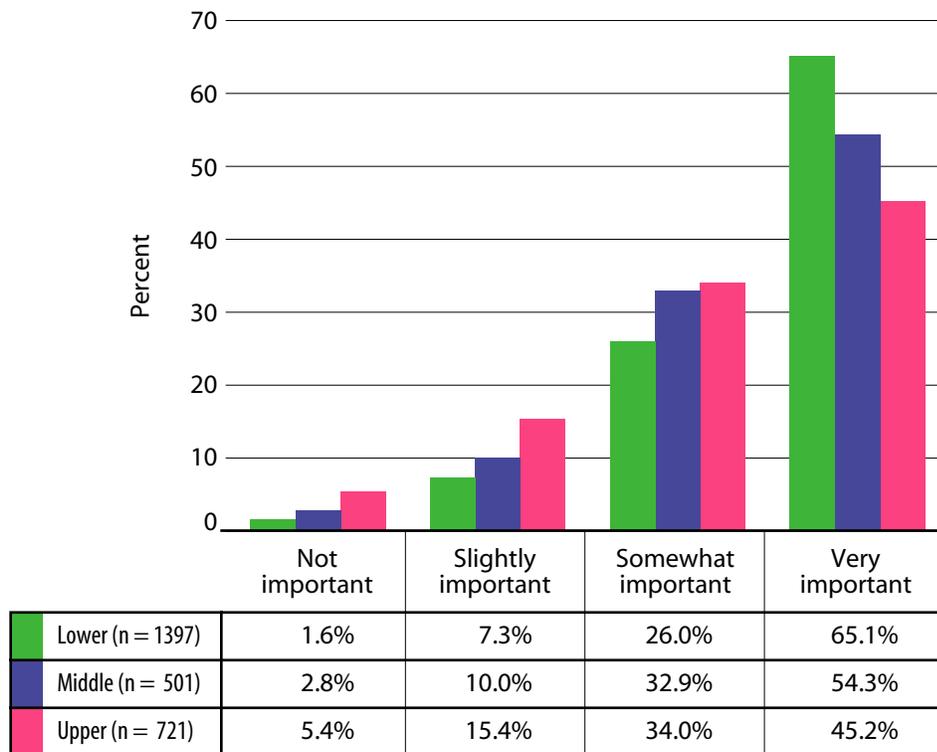


Figure 17 provides information about how important teachers believe preparing students for future jobs is in their school/districts' technology vision. Across all three grade levels, the vast majority of teachers reported that preparing students for future jobs is either very important or somewhat important in their school/districts' technology vision. Between 42.7% and 47.3% of teachers reported that preparing students for future jobs is very important in their school/districts' technology vision, between 31.9% and 33.8% reported that preparing students for future jobs is somewhat important, between 13.7% and 18.2% reported that preparing students for future jobs is slightly important, and between 5.9% and 7.1% reported that preparing students for future jobs is not important in their school/districts' technology vision. There were no significant differences in responses across grade levels.

Figure 17: How important is each of following elements in: Your school/district's technology vision

Preparing students for future jobs

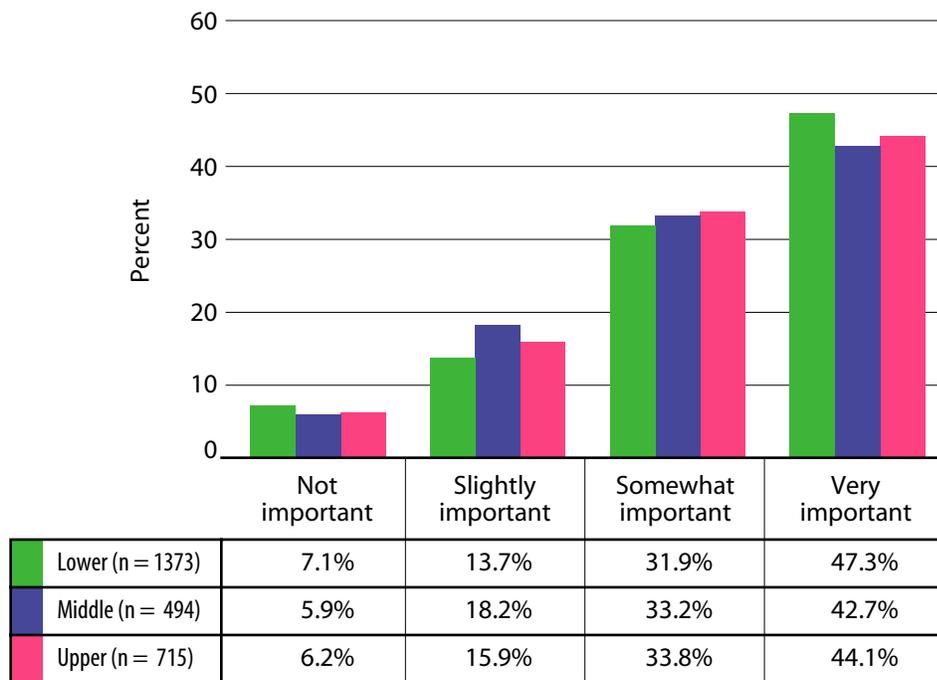


Figure 18 provides information about how important teachers believe improving student test scores is in their school/districts' technology vision. Across all three grade levels, the vast majority of teachers reported that improving student test scores is either very important or somewhat important in their school/districts' technology vision. Between 43.7% and 49.8% of teachers reported that improving student test scores is very important in their school/districts' technology vision, between 30.2% and 34.6% reported that improving student test scores is somewhat important, between 14.4% and 17.7% reported that improving student test scores is slightly important, and between 3.8% and 6.2% reported that improving student test scores is not important in their school/districts' technology vision. There were no significant differences in responses across grade levels.

Figure 18: How important is each of following elements in: Your school/district's technology vision

Improving student test scores

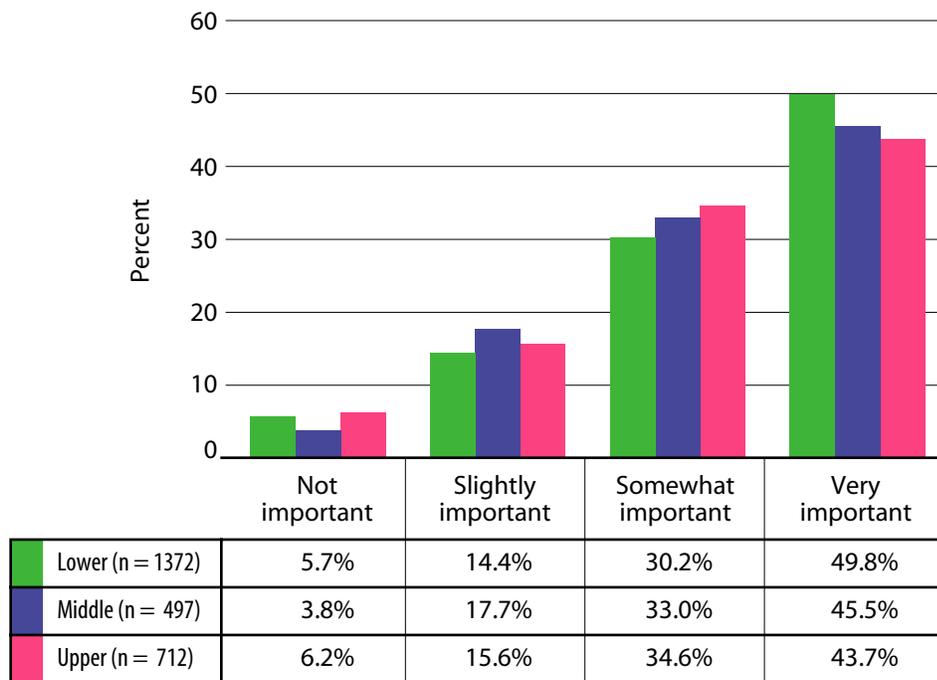


Figure 19 provides information about how important teachers believe promoting active learning strategies is in their school/districts' technology vision. Across all three grade levels, the vast majority of teachers reported that promoting active learning strategies is either very important or somewhat important in their school/districts' technology vision. Between 42.6% and 56.0% of teachers reported that promoting active learning strategies is very important in their school/districts' technology vision, between 30.0% and 38.2% reported that promoting active learning strategies is somewhat important, between 11.0% and 14.3% reported that promoting active learning strategies is slightly important, and between 2.8% and 6.0% reported that promoting active learning strategies is not important in their school/districts' technology vision. A significantly higher percentage of lower grade teachers as compared to middle grade and upper grade teachers reported that promoting active learning strategies is very important in their school/districts' technology vision.

Figure 19: How important is each of following elements in: Your school/district's technology vision

Promoting active learning strategies

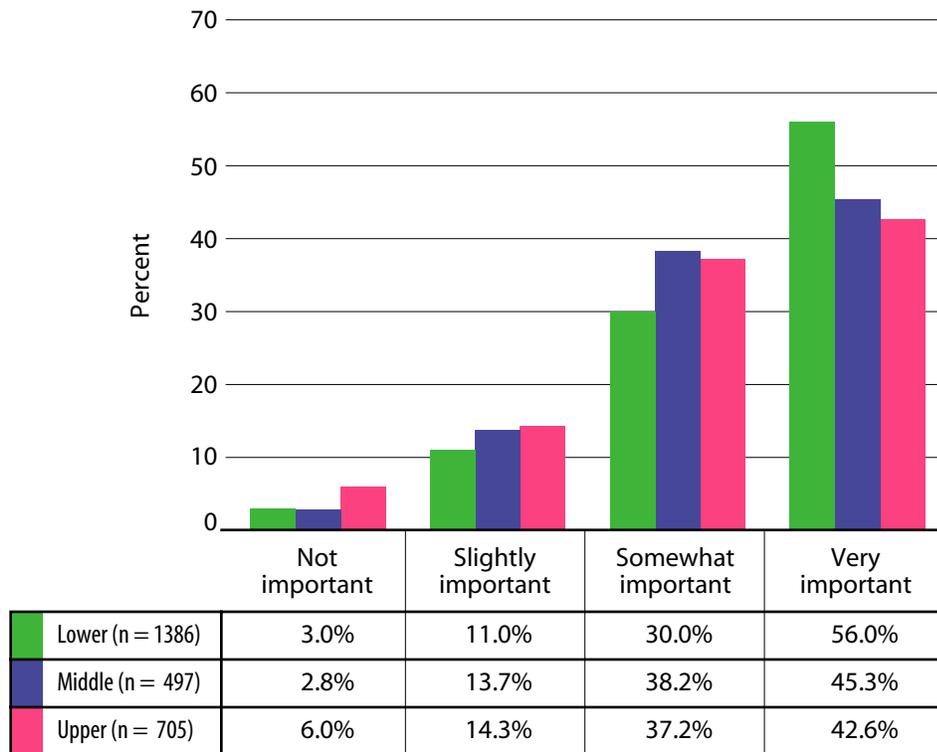


Figure 20 provides information about how important teachers believe supporting instructional reform is in their school/districts' technology vision. Across all three grade levels, the vast majority of teachers reported that supporting instructional reform is either very important or somewhat important in their school/districts' technology vision. Between 38.2% and 48.9% of teachers reported that supporting instructional reform is very important in their school/districts' technology vision, between 35.9% and 40.9% reported that supporting instructional reform is somewhat important, between 11.2% and 16.1% reported that supporting instructional reform is slightly important, and between 3.9% and 7.6% reported that supporting instructional reform is not important in their school/districts' technology vision. A significantly higher percentage of lower grade teachers as compared to upper grade teachers reported that supporting instructional reform is very important in their school/districts' technology vision.

Figure 20: How important is each of following elements in: Your school/district's technology vision

Supporting instructional reform

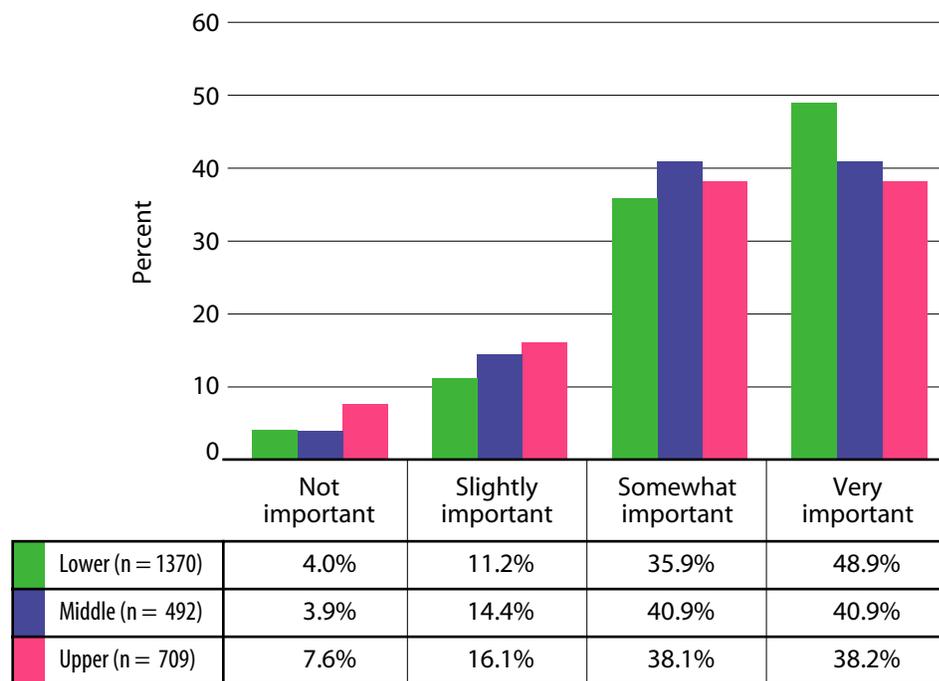


Figure 21 provides information about how important teachers believe satisfying parents' and community interests is in their school/districts' technology vision. Across all three grade levels, the vast majority of teachers reported that satisfying parents' and community interests is either very important or somewhat important in their school/districts' technology vision. Between 44.3% and 50.8% of teachers reported that satisfying parents' and community interests is very important in their school/districts' technology vision, between 34.3% and 37.6% reported that satisfying parents' and community interests is somewhat important, between 12.0% and 15.3% reported that satisfying parents' and community interests is slightly important, and between 2.8% and 5.5% reported that satisfying parents' and community interests is not important in their school/districts' technology vision. A significantly higher percentage of upper grade teachers as compared to lower grade teachers reported that satisfying parents' and community interests is either slightly important or not important in their school/districts' technology vision.

Figure 21: How important is each of following elements in: Your school/district's technology vision

Satisfying parents' and community interests

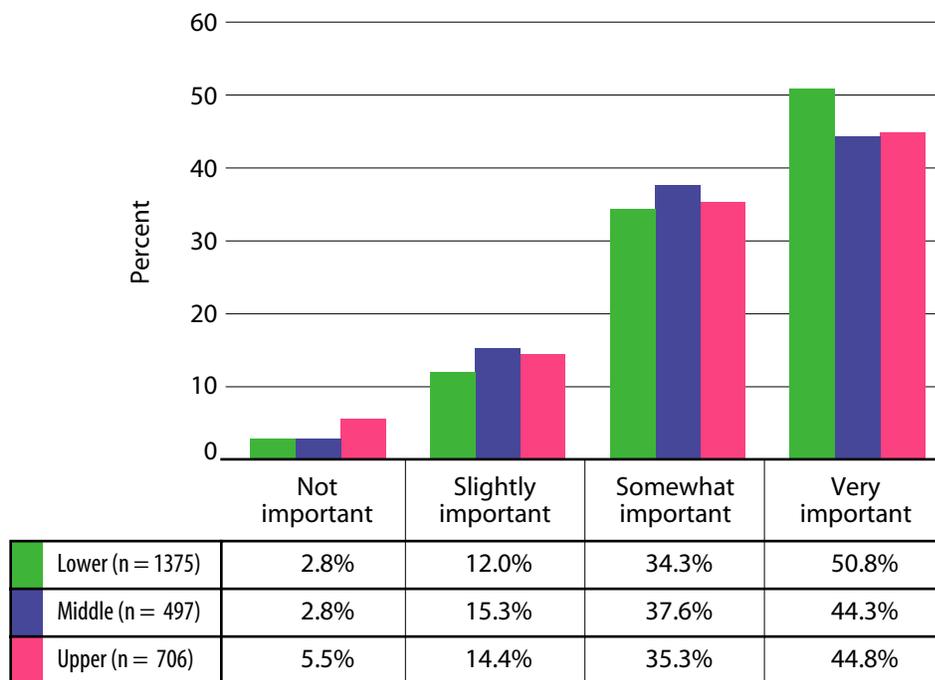


Figure 22 provides information about how important teachers believe improving student computer skills and abilities is in their school/districts' technology vision. Across all three grade levels, the vast majority of teachers reported that improving student computer skills and abilities is either very important or somewhat important in their school/districts' technology vision. Between 42.3% and 61.4% of teachers reported that improving student computer skills and abilities is very important in their school/districts' technology vision, between 28.6% and 40.4% reported that improving student computer skills and abilities is somewhat important, between 8.2% and 13.4% reported that improving student computer skills and abilities is slightly important, and between 1.7% and 3.9% reported that improving student computer skills and abilities is not important in their school/districts' technology vision. There were significant differences in responses across all three grade levels. A higher percentage of lower grade teachers as compared to middle grade and upper grade teachers reported that improving student computer skills and abilities is very important in their school/districts' technology vision and a higher percentage of upper grade teachers as compared to lower grade and middle grade teachers reported that improving student computer skills and abilities is not important in their school/districts' technology vision.

Figure 22: How important is each of following elements in: Your school/district's technology vision

Improving student computer skills and abilities

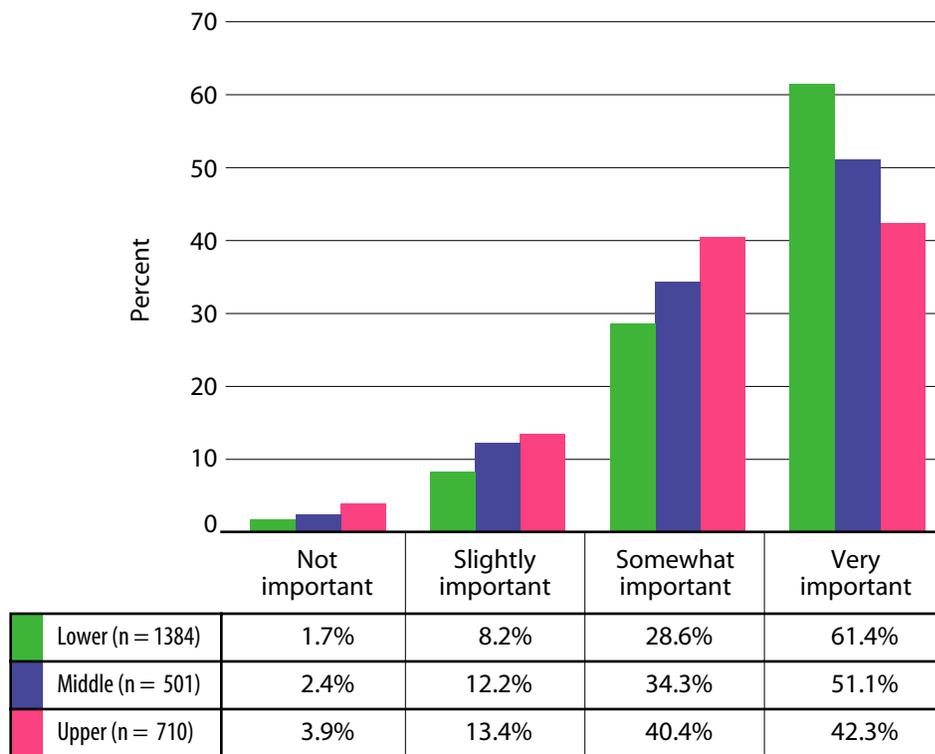


Figure 23 provides information about how important teachers believe improving student proficiency in research is in their school/districts' technology vision. Across all three grade levels, the vast majority of teachers reported that improving student proficiency in research is either very important or somewhat important in their school/districts' technology vision. Between 39.7% and 54.5% of teachers reported that improving student proficiency in research is very important in their school/districts' technology vision, between 32.8% and 40.6% reported that improving student proficiency in research is somewhat important, between 10.2% and 15.2% reported that improving student proficiency in research is slightly important, and between 2.0% and 4.5% reported that improving student proficiency in research is not important in their school/districts' technology vision. A significantly higher percentage of lower grade and middle grade teachers as compared to upper grade teachers reported that improving student proficiency in research is very important in their school/districts' technology vision.

Figure 23: How important is each of following elements in: Your school/district's technology vision

Improving student proficiency in research

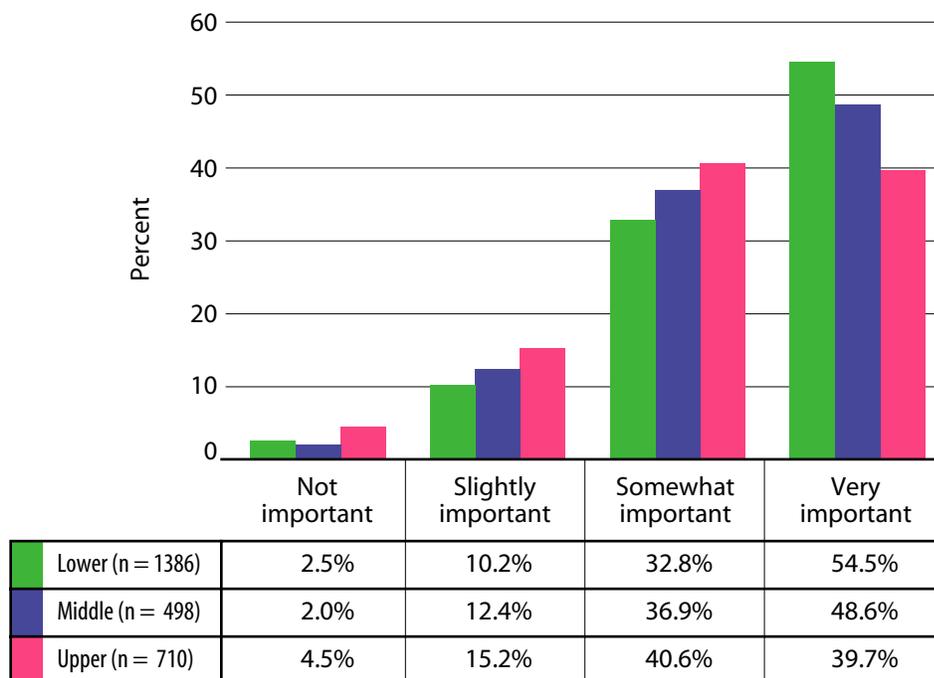


Figure 24 provides information about how important teachers believe improving teacher productivity and efficiency is in their school/districts' technology vision. Across all three grade levels, the vast majority of teachers reported that improving teacher productivity and efficiency is either very important or somewhat important in their school/districts' technology vision. Between 42.0% and 55.1% of teachers reported that improving teacher productivity and efficiency is very important in their school/districts' technology vision, between 32.3% and 37.3% reported that improving teacher productivity and efficiency is somewhat important, between 9.8% and 13.7% reported that improving teacher productivity and efficiency is slightly important, and between 2.7% and 7.0% reported that improving teacher productivity and efficiency is not important in their school/districts' technology vision. A significantly higher percentage of lower grade teachers as compared to upper grade teachers reported that improving teacher productivity and efficiency is very important in their school/districts' technology vision.

Figure 24: How important is each of following elements in: Your school/district's technology vision

Improving teacher productivity and efficiency

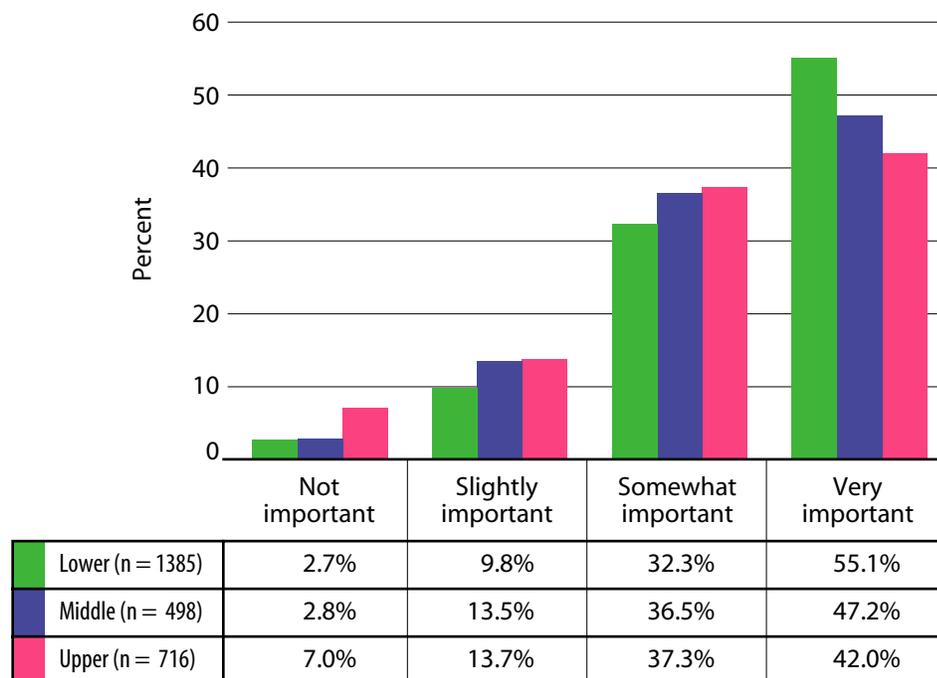
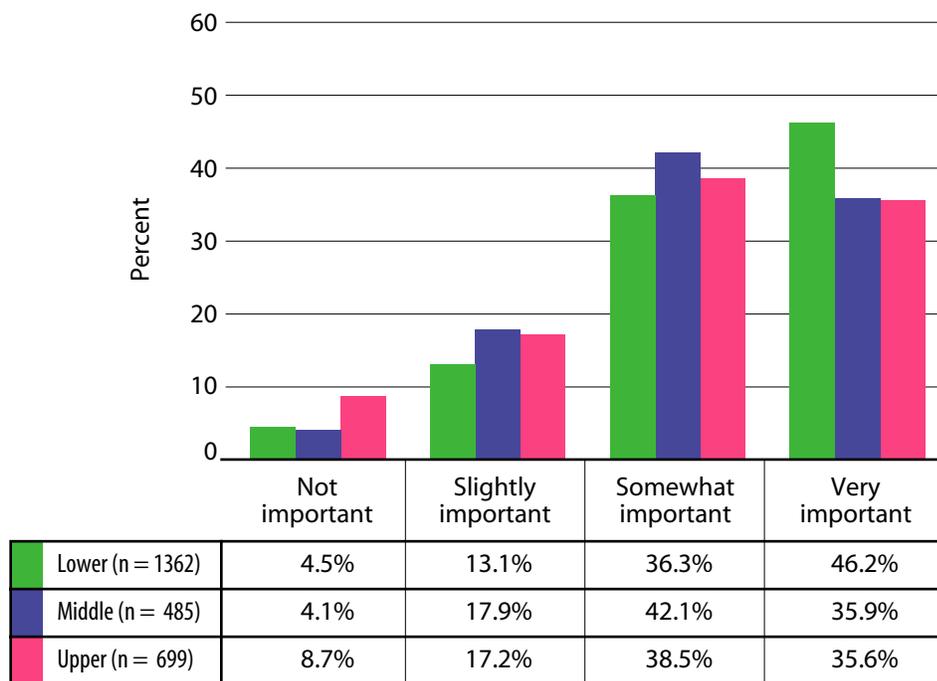


Figure 25 provides information about how important teachers believe target level of technology (i.e., student/computer ratio) is in their school/districts' technology vision. Across all three grade levels, the vast majority of teachers reported that target level of technology is either very important or somewhat important in their school/districts' technology vision. Between 35.6% and 46.2% of teachers reported that target level of technology is very important in their school/districts' technology vision, between 36.3% and 42.1% reported that target level of technology is somewhat important, between 13.1% and 17.9% reported that target level of technology is slightly important, and between 4.1% and 8.7% reported that target level of technology is not important in their school/districts' technology vision. A significantly higher percentage of lower grade teachers as compared to middle grade and upper grade teachers reported that target level of technology (i.e., student/computer ratio) is very important in their school/districts' technology vision.

Figure 25: How important is each of following elements in: Your school/district's technology vision

Target level of technology (i.e., student/computer ratio)



Beliefs About Shaping Teacher Computer Use in the Classroom

The following 14 items asked teachers to indicate how important they believe each element is in shaping computer use in their own classrooms. There were four possible responses: not important, slightly important, somewhat important, and very important.

Figure 26 provides information about how important teachers believe that using technology to improve classroom instruction is in shaping computer use in their own classrooms. Across all three grade levels, the vast majority of teachers reported that using technology to improve classroom instruction is either very important or somewhat important in shaping computer use in their own classrooms. Between 38.9% and 42.8% of teachers reported that using technology to improve classroom instruction is very important, between 36.2% and 38.3% reported that using technology to improve classroom instruction is somewhat important, between 15.4% and 18.6% reported that using technology to improve classroom instruction is slightly important, and between 3.3% and 7.1% reported that using technology to improve classroom instruction is not important in shaping computer use in their own classrooms. There were no significant differences in responses across grade levels.

Figure 26: How important is each of following elements in: Shaping computer use in your own classroom

Using technology to improve classroom instruction

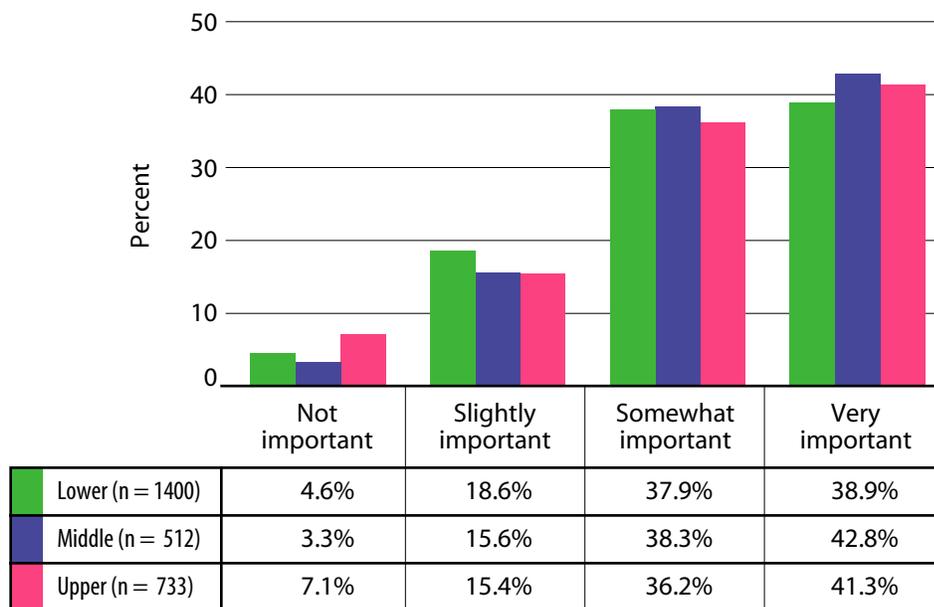


Figure 27 provides information about how important teachers believe that using technology to improve student performance is in shaping computer use in their own classrooms. Across all three grade levels, the vast majority of teachers reported that using technology to improve student performance is either very important or somewhat important in shaping computer use in their classrooms. Between 36.0% and 43.9% of teachers reported that using technology to improve student performance is very important, between 36.5% and 37.6% reported that using technology to improve student performance is somewhat important, between 16.0% and 20.7% reported that using technology to improve student performance is slightly important, and between 3.1% and 6.7% reported that using technology to improve student performance is not important in shaping computer use in their classrooms. A significantly higher percentage of middle grade teachers as compared to lower grade teachers reported that using technology to improve student performance is very important in shaping computer use in their own classrooms.

Figure 27: How important is each of following elements in: Shaping computer use in your own classroom

Using technology to improve student performance

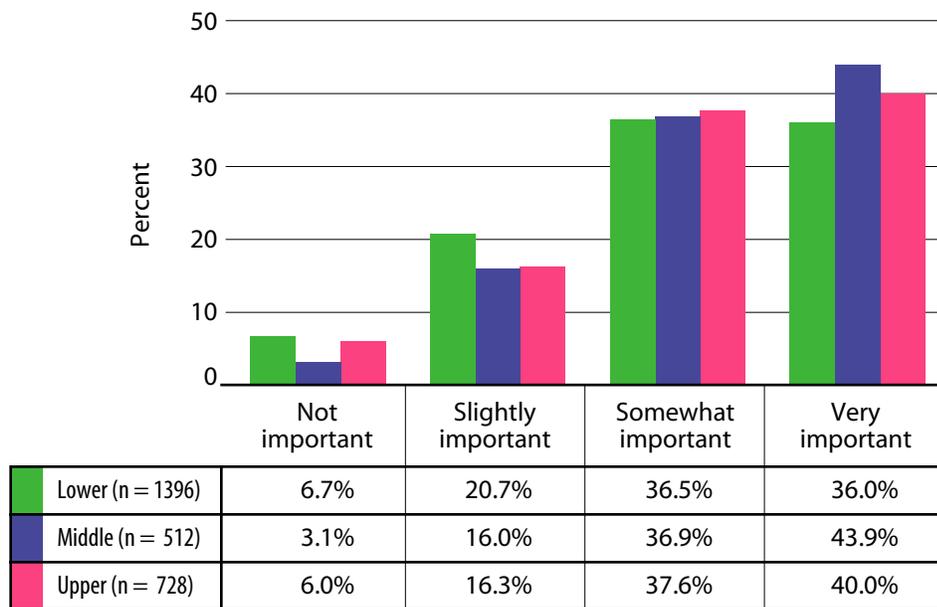


Figure 28 provides information about how important teachers believe student proficiency in teaming and collaboration is in shaping computer use in their own classrooms. Across all three grade levels, the majority of teachers reported that student proficiency in teaming and collaboration is either very important or somewhat important in shaping computer use in their own classrooms. Between 30.2% and 33.5% of teachers reported that student proficiency in teaming and collaboration is very important, between 30.6% and 37.0% reported that student proficiency in teaming and collaboration is somewhat important, between 22.3% and 23.2% reported that student proficiency in teaming and collaboration is slightly important, and between 7.8% and 12.7% reported that student proficiency in teaming and collaboration is not important in shaping computer use in their own classrooms. There were no significant differences in responses across grade levels.

Figure 28: How important is each of following elements in: Shaping computer use in your own classroom

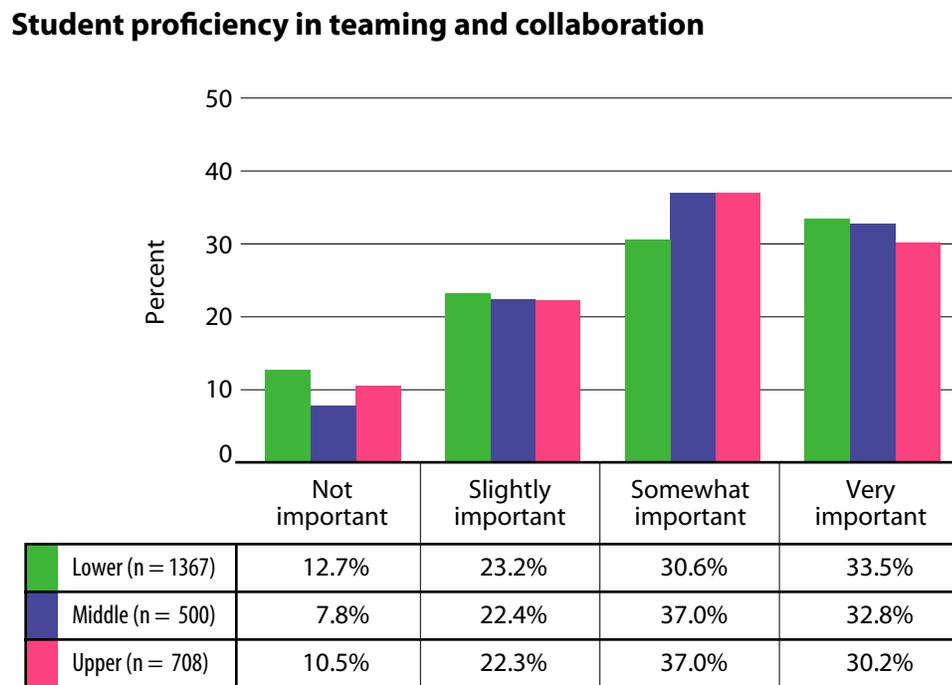


Figure 29 provides information about how important teachers believe student proficiency in data analysis is in shaping computer use in their own classrooms. Between 19.3% and 32.7% of teachers reported that student proficiency in data analysis is very important, between 29.4% and 32.1% reported that student proficiency in data analysis is somewhat important, between 21.3% and 27.0% reported that student proficiency in data analysis is slightly important, and between 11.7% and 24.4% reported that student proficiency in data analysis is not important in shaping computer use in their own classrooms. A significantly higher percentage of middle grade and upper grade teachers as compared to lower grade teachers reported that student proficiency in data analysis is very important in shaping computer use in their own classrooms.

Figure 29: How important is each of following elements in: Shaping computer use in your own classroom

Student proficiency in data analysis

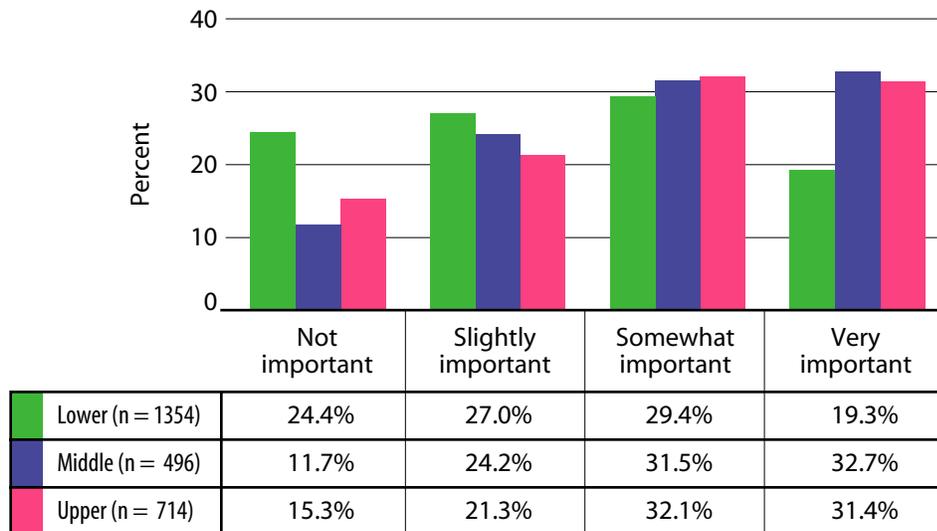


Figure 30 provides information about how important teachers believe increasing teacher proficiency in use of technology is in shaping computer use in their own classrooms. Across all three grade levels, the vast majority of teachers reported that increasing teacher proficiency in use of technology is either very important or somewhat important in shaping computer use in their own classrooms. Between 43.9% and 53.8% of teachers reported that increasing teacher proficiency in use of technology is very important, between 30.1% and 34.4% reported that increasing teacher proficiency in use of technology is somewhat important, between 10.8% and 14.7% reported that increasing teacher proficiency in use of technology is slightly important, and between 3.5% and 6.9% reported that increasing teacher proficiency in use of technology is not important in shaping computer use in their own classrooms. A significantly higher percentage of lower grade and middle grade teachers as compared to upper grade teachers reported that increasing teacher proficiency in use of technology is very important in shaping computer use in their own classrooms.

Figure 30: How important is each of following elements in: Shaping computer use in your own classroom

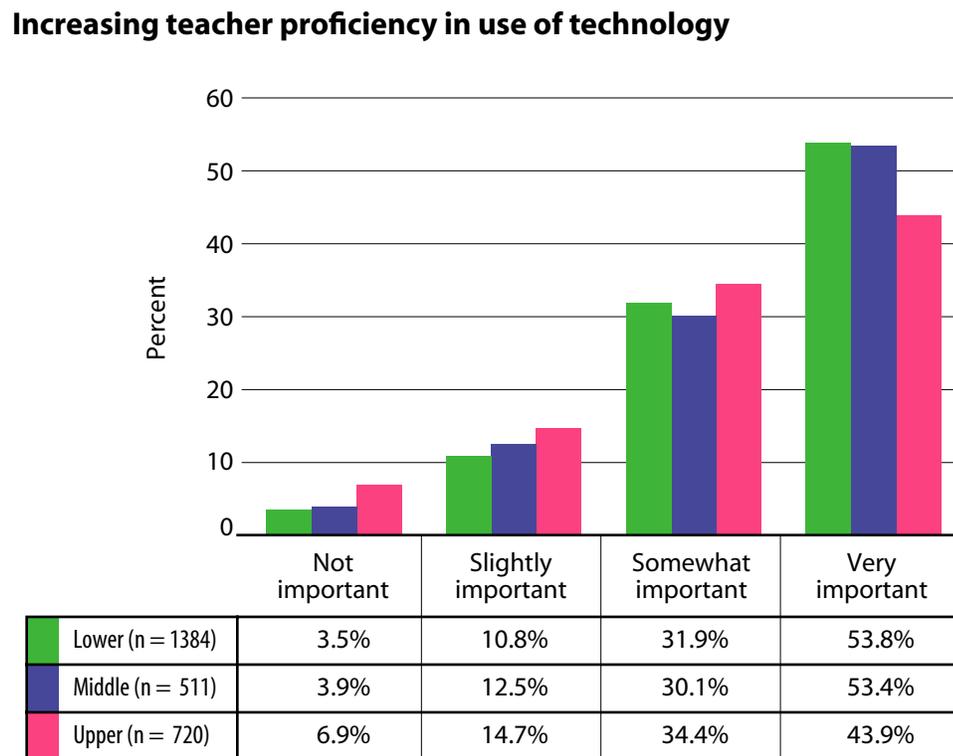


Figure 31 provides information about how important teachers believe preparing students for future jobs is in shaping computer use in their own classrooms. Across all three grade levels, the vast majority of teachers reported that preparing students for future jobs is either very important or somewhat important in shaping computer use in their own classrooms. Between 30.8% and 36.6% of teachers reported that preparing students for future jobs is very important, between 26.0% and 36.4% reported that preparing students for future jobs is somewhat important, between 17.8% and 21.9% reported that preparing students for future jobs is slightly important, and between 7.9% and 21.3% reported that preparing students for future jobs is not important in shaping computer use in their own classrooms. A significantly higher percentage of lower grade teachers as compared to middle grade and upper grade teachers reported that preparing students for future jobs is not important in shaping computer use in their own classrooms.

Figure 31: How important is each of following elements in: Shaping computer use in your own classroom

Preparing students for future jobs

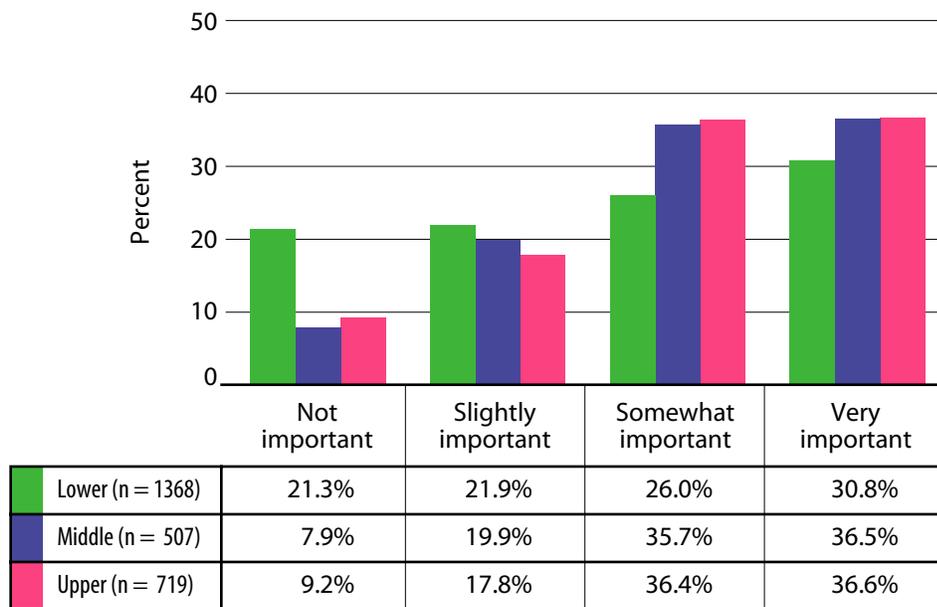


Figure 32 provides information about how important teachers believe improving student test scores is in shaping computer use in their own classrooms. Across all three grade levels, the vast majority of teachers reported that improving student test scores is either very important or somewhat important in shaping computer use in their own classrooms. Between 28.9% and 31.9% of teachers reported that improving student test scores is very important, between 29.6% and 35.4% reported that improving student test scores is somewhat important, between 21.2% and 25.4% reported that improving student test scores is slightly important, and between 8.1% and 18.8% reported that improving student test scores is not important in shaping computer use in their own classrooms. A significantly higher percentage of lower grade teachers as compared to middle grade and upper grade teachers reported that improving student test scores is not important in shaping computer use in their own classrooms.

Figure 32: How important is each of following elements in: Shaping computer use in your own classroom

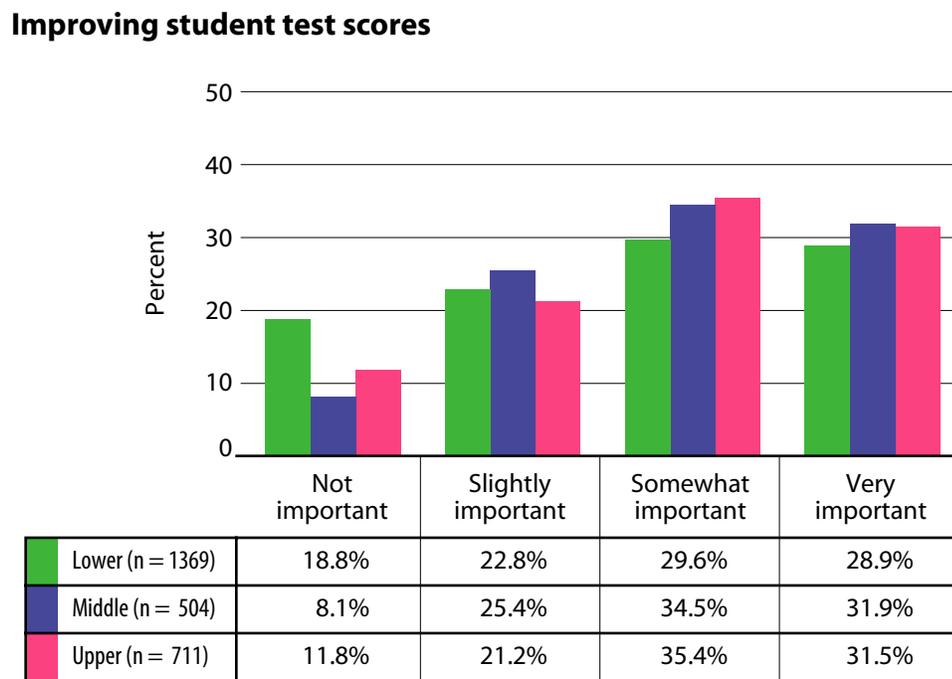


Figure 33 provides information about how important teachers believe promoting active learning strategies is in shaping computer use in their own classrooms. Across all three grade levels, the vast majority of teachers reported that promoting active learning strategies is either very important or somewhat important in shaping computer use in their own classrooms. Between 43.4% and 47.8% of teachers reported that promoting active learning strategies is very important, between 29.8% and 34.4% reported that promoting active learning strategies is somewhat important, between 13.7% and 17.9% reported that promoting active learning strategies is slightly important, and between 4.3% and 8.5% reported that promoting active learning strategies is not important in shaping computer use in their own classrooms. There were no significant differences in responses across grade levels.

Figure 33: How important is each of following elements in: Shaping computer use in your own classroom

Promoting active learning strategies

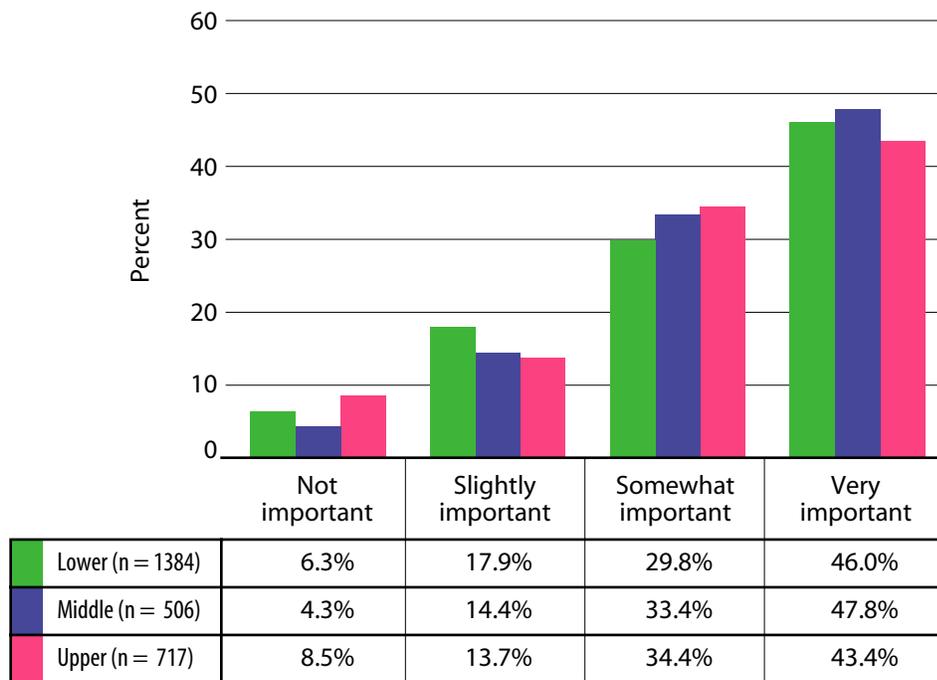


Figure 34 provides information about how important teachers believe supporting instructional reform is in shaping computer use in their own classrooms. Across all three grade levels, the majority of teachers reported that supporting instructional reform is either very important or somewhat important in shaping computer use in their own classrooms. Between 29.0% and 32.2% of teachers reported that supporting instructional reform is very important, between 35.6% and 39.3% reported that supporting instructional reform is somewhat important, between 21.6% and 22.7% reported that supporting instructional reform is slightly important, and between 6.9% and 12.7% reported that supporting instructional reform is not important in shaping computer use in their own classrooms. There were no significant differences in responses across grade levels.

Figure 34: How important is each of following elements in: Shaping computer use in your own classroom

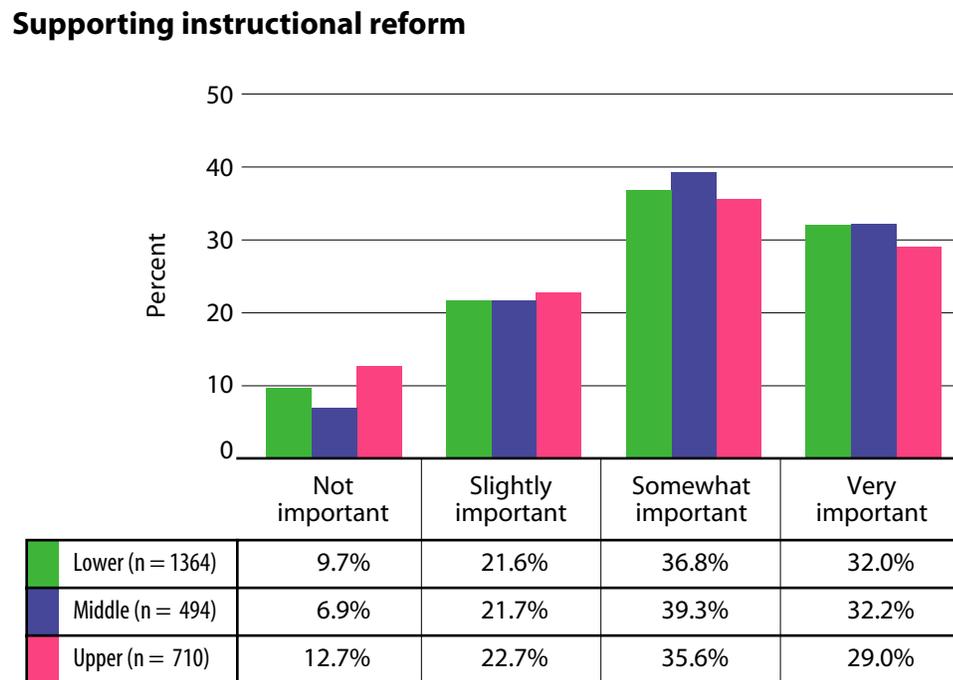


Figure 35 provides information about how important teachers believe satisfying parents' and community interests is in shaping computer use in their own classrooms. Across all three grade levels, the majority of teachers reported that satisfying parents' and community interests is either very important or somewhat important in shaping computer use in their classrooms. Between 24.2% and 28.9% of teachers reported that satisfying parents' and community interests is very important, between 37.8% and 38.7% reported that satisfying parents' and community interests is somewhat important, between 24.7% and 29.6% reported that satisfying parents' and community interests is slightly important, and between 7.4% and 11.5% reported that satisfying parents' and community interests is not important in shaping computer use in their own classrooms. There were no significant differences in responses across grade levels.

Figure 35: How important is each of following elements in: Shaping computer use in your own classroom

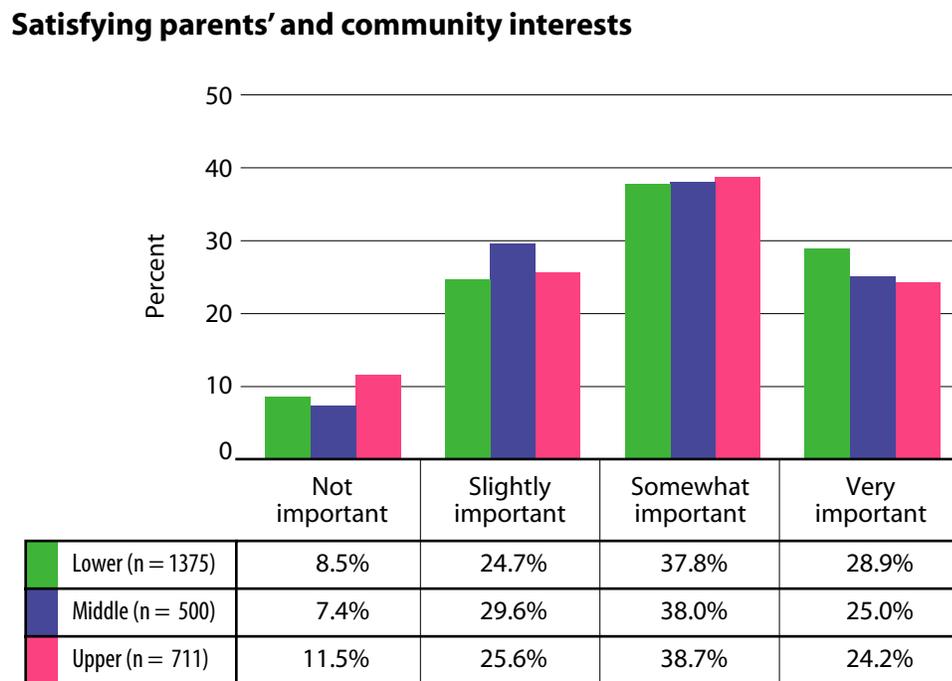


Figure 36 provides information about how important teachers believe improving student computer skills and abilities is in shaping computer use in their own classrooms. Across all three grade levels, the vast majority of teachers reported that improving student computer skills and abilities is either very important or somewhat important in shaping computer use in their own classrooms. Between 38.3% and 47.5% of teachers reported that improving student computer skills and abilities is very important, between 34.5% and 37.2% reported that improving student computer skills and abilities is somewhat important, between 14.0% and 18.1% reported that improving student computer skills and abilities is slightly important, and between 4.0% and 7.3% reported that improving student computer skills and abilities is not important in shaping computer use in their own classrooms. A significantly higher percentage of lower grade teachers as compared to upper grade teachers reported that improving student computer skills and abilities is very important in shaping computer use in their own classrooms.

Figure 36: How important is each of following elements in: Shaping computer use in your own classroom

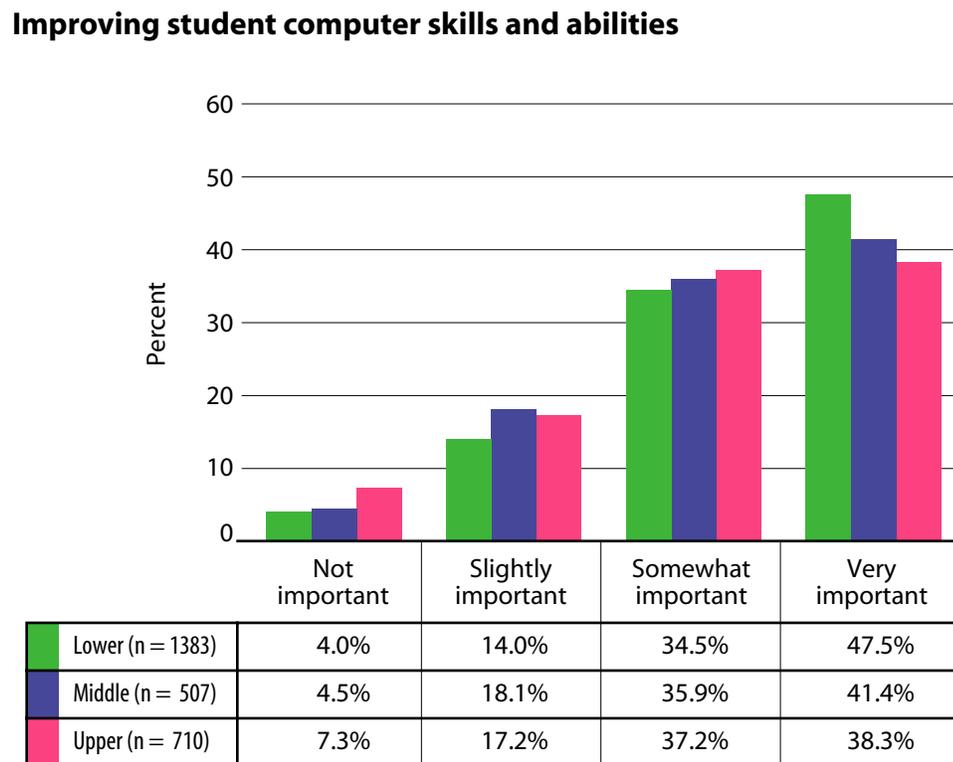


Figure 37 provides information about how important teachers believe improving student proficiency in research is in shaping computer use in their own classrooms. Across all three grade levels, the vast majority of teachers reported that improving student proficiency in research is either very important or somewhat important in shaping computer use in their own classrooms. Between 40.0% and 49.0% of teachers reported that improving student proficiency in research is very important, between 33.6% and 35.7% reported that improving student proficiency in research is somewhat important, between 13.3% and 16.1% reported that improving student proficiency in research is slightly important, and between 3.2% and 10.3% reported that improving student proficiency in research is not important in shaping computer use in their own classrooms. A significantly higher percentage of middle grade teachers as compared to lower grade teachers reported that improving student proficiency in research is very important in shaping computer use in their own classrooms.

Figure 37: How important is each of following elements in: Shaping computer use in your own classroom

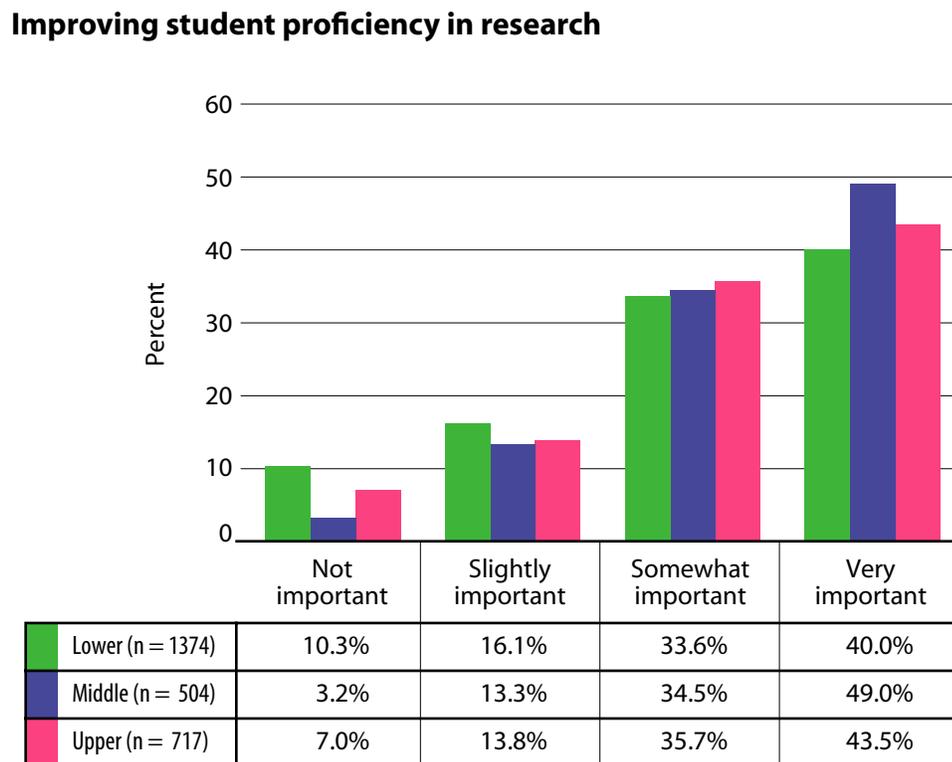


Figure 38 provides information about how important teachers believe improving teacher productivity and efficiency is in shaping computer use in their own classrooms. Across all three grade levels, the majority of teachers reported that improving teacher productivity and efficiency is very important in shaping computer use in their own classrooms. Between 50.5% and 54.5% of teachers reported that improving teacher productivity and efficiency is very important, between 31.1% and 34.4% reported that improving teacher productivity and efficiency is somewhat important, between 8.7% and 10.9% reported that improving teacher productivity and efficiency is slightly important, and between 2.4% and 6.3% reported that improving teacher productivity and efficiency is not important in shaping computer use in their own classrooms. There were no significant differences in responses across grade levels.

Figure 38: How important is each of following elements in: Shaping computer use in your own classroom

Improving teacher productivity and efficiency

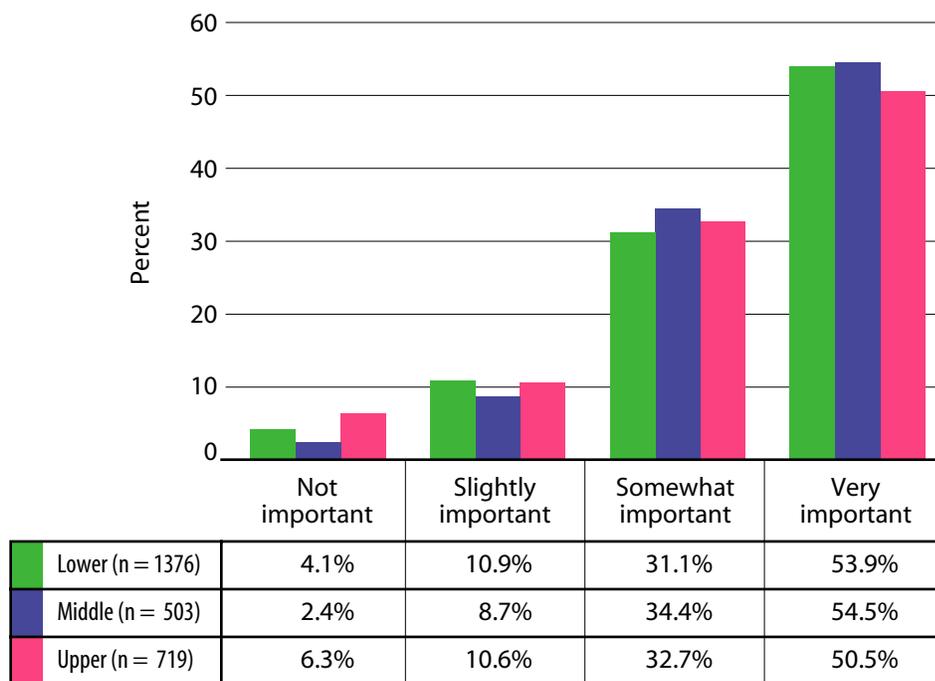


Figure 39 provides information about how important teachers believe target level of technology (i.e., student/computer ratio) is in shaping computer use in their own classrooms. Across all three grade levels, the vast majority of teachers reported that target level of technology is either very important or somewhat important in shaping computer use in their own classrooms. Between 36.9% and 42.3% of teachers reported that target level of technology is very important, between 32.5% and 34.8% reported that target level of technology is somewhat important, between 17.0% and 17.5% reported that target level of technology is slightly important, and between 7.5% and 11.5% reported that target level of technology (i.e., student/computer ratio) is not important in shaping computer use in their own classrooms. There were no significant differences in responses across grade levels.

Figure 39: How important is each of following elements in: Shaping computer use in your own classroom

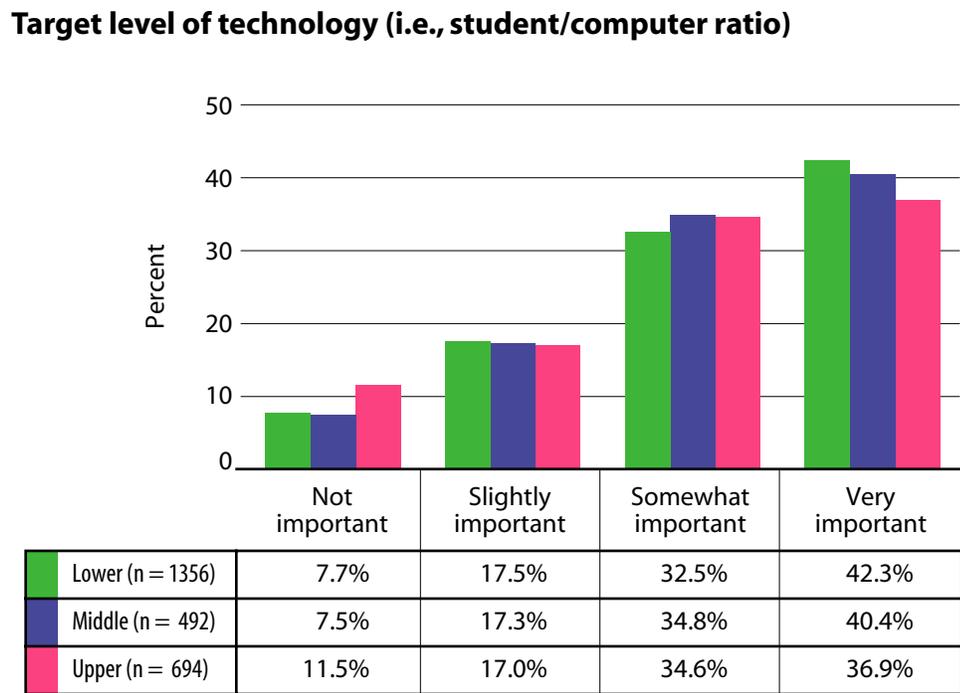


Figure 40 provides summary information for the 28 items that asked teachers to indicate how important they believe that specific classroom-related elements are in their school/districts' technology vision and in shaping their own use of technology in their classrooms. Across all three grade levels, teachers reported that they believe that the surveyed elements are more important to the school/districts' technology vision than they are to their own classroom use.

The only element that teachers did not report as being more important in their school/districts' technology vision than in shaping their own classroom use is "improving teacher productivity and efficiency." Middle grade and upper grade teachers reported that "improving teacher productivity and efficiency" is more important in shaping their use of technology in their classrooms than it is in their school/districts' technology vision.

Based on the average score of teachers' responses, lower grade and middle grade teachers reported that increasing teacher proficiency in use of technology is the most important element in their school/districts' technology vision. Lower grade teachers also reported that increasing teacher proficiency in use of technology is the most important element in shaping computer use in their own classroom, while middle grade teachers reported that improving teacher productivity and efficiency is the most important element in shaping computer use in their own classrooms. Upper grade teachers reported that using technology to improve classroom instruction is the most important element in their school/districts' technology vision and improving teacher productivity and efficiency is the most important element shaping their own use of technology in their classrooms.

Lower grade teachers reported that student proficiency in data analysis is the least important element in both their school/districts' technology vision and in shaping their own use of technology in their classrooms. Middle grade and upper grade teachers reported that student proficiency in data analysis is the least important element in their school/districts' technology vision and satisfying parents' and community interests is the least important element in shaping their own use of technology in their classrooms. Teachers' beliefs about the importance of student proficiency in data analysis in shaping their own computer use in the classroom differed by grade level more than any other element. Lower grade teachers reported that student proficiency in data analysis is less important than middle grade and upper grade teachers reported it to be.

Figure 40: Summary of Teacher Beliefs About Their Technology Visions and Use of Technology in the Classroom



Summary

This report summarizes opinions of 2,894 teachers that replied to survey items regarding their visions, goals, and leadership beliefs about teaching. Across all three grade levels, the majority of teachers agreed that in their districts technology is an integral part of the overall education program. A significantly higher percentage of lower grade teachers as compared to upper grade teachers either strongly agreed or agreed that technology is an integral part of the overall education program in their districts.

When teachers were asked how aware they are of their school/districts' technology vision and were offered response options of "not aware", "somewhat aware", "aware", and "very aware", the most common response across grade levels was "somewhat aware." There were significant differences in responses to this item across all three grade levels. Lower grade teachers were more likely to report that they are aware of their school/districts' vision for the use of technology in their classrooms, while upper grade teachers were more likely to report that they are not aware of their school/districts' vision for the use of technology in their classrooms.

Teachers were asked to indicate how much emphasis each of the following school personnel place on technology: the superintendent or assistant superintendent, the principal, the department head, and themselves. Lower grade and middle grade teachers reported that the department head puts the least emphasis on technology while the superintendent or assistant superintendent places the most emphasis on technology. Upper grade teachers reported that the principal places the least emphasis on technology and that they place the most amount of emphasis on technology themselves.

Teachers were asked to indicate whether the curriculum in their schools is controlled by the teachers or by the district, both today and 5 years ago. Teachers across all three grade levels reported that there was significantly more teacher flexibility in controlling the curriculum 5 years ago than there is today. Upper grade teachers were more likely than lower grade and middle grade teachers to report that there is more teacher flexibility in developing the curriculum both today and 5 years ago.

According to information provided by these teachers about the importance of 28 specific classroom elements, teachers reported that these elements are more important in their school/districts' technology vision than they are in shaping computer use in their own classrooms. Based on the average score of teachers' responses, lower grade and middle grade teachers reported that increasing teacher proficiency in use of technology is the most important element in their school/districts' technology vision. Lower grade teachers also reported that increasing teacher proficiency in use of technology is the most important element in shaping computer use in their own classrooms, while middle grade teachers reported that improving teacher productivity and efficiency is the most important element in shaping computer use in their own classrooms. Upper grade teachers reported that using technology to improve classroom instruction is the most important element in their school/districts' technology vision and improving teacher productivity and efficiency is the most important element shaping their own use of technology in their classrooms.

Lower grade teachers reported that student proficiency in data analysis is the least important element in both their school/districts' technology vision and in shaping

their own use of technology in their classrooms. Middle grade and upper grade teachers reported that student proficiency in data analysis is the least important element in their school/districts' technology vision and satisfying parents' and community interests is the least important element in shaping their own use of technology in their classrooms.



inTASC is a not-for-profit research group that works collaboratively with schools, educational agencies, and businesses to conduct research and development on a variety of issues related to technology and assessment. inTASC brings together researchers who have examined several aspects of technology and assessment in schools over the past decade to focus on new questions and issues that arise from the field. inTASC is unique in that it does not develop research studies and then seek schools to participate in research activities. Instead, schools, educational agencies, and businesses approach inTASC with their own ideas and/or questions that require systematic research to address. Research conducted by inTASC is developed, conducted, and often disseminated in collaboration with our educational and business partners.

inTASC believes that advances in educational technology and continuously emerging applications of those technologies coupled with growing demands to document impacts on teaching and learning requires a dual focus on instructional uses of technology and applications of technology to new forms of assessment. For this reason, inTASC collaborates on research that focuses on instructional uses of technology and on applications of computer-based technologies to the technology of testing and assessment. It is our hope that this dual focus will enable us to provide research-based information to schools and educational leaders about the impacts of educational technology, and to produce new forms of assessment that capitalize on the powers of computer-based technologies and that are more sensitive to the types of learning enabled by educational technologies.



Use, Support, and Effect of Instructional Technology Study

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