Integration of Technology in Classroom Instruction: Investigating The Lack of Use of Technology By Teachers For Instructional Activities In The Classroom
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Lack of Use of Technology: Case Study Questions

1. What are the knowledge, motivation, and organization barriers that might prevent teachers at Universal American School from the use of technology in classrooms?
2. What are the recommended solutions to close the knowledge, motivation, and organization gaps that prevent teachers at Universal American School from achieving their goal of being proficient in teaching 21st century skills using technology?
3. What technologies are being used by teachers in the classroom?
4. How is the use of technology being evaluated in the classroom setting?

Key Literature
- Expectancy Value Theory (Eccles & Wigfield, 2002)
- Gap Analysis Framework (Clark & Estes, 2008)
- Socio-Cognitive Theory (Bandura, 2001)
- Technology, Pedagogy and Content Knowledge (Koehler & Mishra, 2008)

Methods and Data Analysis: An Inside Look
- A mixed methods study
- Teacher surveys: 143 electronic surveys, 69 responses, two groups identified based on survey responses according to level of usage of technology
- Interviews: 6 interviews, 2 from group of high level of usage, 4 from group with low level of tech usage, 3 administrators
- Classroom Observations: 3 classroom observations
- Document Analysis: Conducted prior to the interviews

Significance & Findings

Knowledge, Motivation, Organization Barriers (Validated Causes)

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<tr>
<th>KNOWLEDGE</th>
<th>MOTIVATION</th>
<th>ORGANIZATION</th>
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<td>Lack of factual knowledge of technology proficiency standards for teachers and students</td>
<td>Lack of interest in attending professional development workshops</td>
<td>Lack of clear communication by the leadership on the expectation of use of technology</td>
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<td>Lack of procedural skills in the use of technology in the classrooms</td>
<td>Lack of self-efficacy in learning new technologies</td>
<td>Lack of adequate professional development</td>
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<td>Lack of metacognitive skills in the use of the appropriate technology in the classrooms for the designated activities</td>
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<td>Lack of incentives for effectively using technology in classrooms</td>
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Technologies Used by Teachers
- Technologies that are used by teachers, in order of preference, are smartboards, mobile devices and learning management system.
- The top three online resources that are favored by teachers are Brainpop, EBSCO and RAZ Kids.
- Teachers prefer having both laptops and iPads as mobile devices to be provided by the school.
- Sixty percent of the teachers surveyed prefer an Apple Mac laptop over a PC laptop.

Solutions
- Ensure teachers receive required documentation on technology proficiency standards for students and teachers during the orientation week prior to the start of the school year.
- Focus on the professional development activities for teachers during the next academic year.
- Help teachers establish peer support groups, provide incentives for the exemplary use of technology, and provide technical support during classroom time.

Areas for Future Research
- Research on measures of the use of technology linking to tangible student achievement
- Research on measures of the use of technology linking to 21st century skills of problem solving and critical thinking
- Action oriented research that examines teachers in actual practice through observations and not relying on self-reported data

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