

Using Microsoft's Academic Alliance to Ease the Financial Burden on IS Educators and Students

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Abstract

The importance of providing current, real-world, tools to information systems (IS) students at an affordable cost is a challenge many IS educators continue to face. In these times of tightening academic budgets and increasing educational costs, this research discusses one method of addressing these important issues. IS educators can use Microsoft's Academic Alliance to distribute software to IS students. This article identifies a "how to" strategy for IS educators to follow to obtain an agreement with Microsoft and use the Academic Alliance website. This strategic agreement allows downloading of software by IS students at no charge. The software may be used for personal and/or class use. To provide additional understanding of MSDN Academic Alliance usage, this research also investigates IS students' perception of the usability of Microsoft Academic Alliance website, downloaded software, and their desire to use these products in the future.

Keywords: Academic, Alliance, Microsoft, Usability

1. INTRODUCTION

The importance of providing current, real-world, tools to information systems (IS) students at an affordable cost is a challenge many IS educators continue to face. In these times of tightening academic budgets and increasing educational costs, this research discusses one method of addressing these important issues. IS educators can use Microsoft's Academic Alliance to distribute software to IS students. This article identifies a "how to" strategy for IS educators to follow to obtain an agreement with Microsoft and use the Academic Alliance website. This strategic

agreement allows downloading of software by IS students at no charge. The software may be used for personal and/or class use. To provide additional understanding of MSDN Academic Alliance usage, this research also investigates IS students' perception of the usability of Microsoft Academic Alliance website, downloaded software, and their desire to use these products in the future.

2. MICROSOFT ACADEMIC ALLIANCE

A review of the relevant literature on Microsoft's Academic Alliance reveals very few research oriented articles. This article

focuses on providing information primarily taken from Microsoft's Academic Alliance Developer and Software Centers focusing on assisting IS educators on the particulars of implementing this program at their university. The MSDN Academic Alliance is an annual membership program for Computer Science, Engineering, MIS/CIS, IS, and IT departments that teach and utilize technology. Membership in the program provides a complete, inexpensive solution to keep academic labs, faculty and students on the leading edge of technology. Currently, the annual membership fee for the Academic Alliance is \$799 per department. With a full version of Window XP Professional listed at \$199 per license, the MSDN Academic Alliance is able to provide significant cost savings for IS educators.

However, there are limitations to the MSDN Academic Alliance agreement. The software available from the MSDN Academic Alliance must focus exclusively on students and may not be used to run the infrastructure of school or department. To ensure that only IS students are able to take advantage of the MSDN Academic Alliance, IS educators can set up requirements to limit downloading to only IS students. For example, students must be enrolled in at least one credit in the IS department to be eligible to download software for use in their coursework and/or personal projects. To provide continued usage, Microsoft does not require students to take the software off at end of course (MSDN Academic Alliance Developer Center, 2005).

Academic Benefits

Beyond the obvious financial benefits to IS students, there are several additional benefits for IS educators when they choose to participate in the MSDN Academic Alliance (MSDN Academic Alliance Developer Center, 2005):

1. Access to the latest set of Microsoft platforms, servers, and developer tools via regular CD shipments and a download website.
2. A license to install Microsoft software on any number of lab machines used by the department for instructional and research purposes.
3. A license to provide Microsoft software to students taking courses that lead to credit or a certificate within the department, so they can load the software on their personal computers for use in coursework and personal projects.
4. Software distribution to students through e-academy License Management Systems (ELMS).
5. Private newsgroups where faculty can ask technical and administrative questions, collaborate with each other, and talk with the MSDN Academic Alliance team.
6. A comprehensive website that provides resources for faculty, including: program information and news, projects, tutorials, academically focused articles, and curriculum.

MSDN Website Functions

The MSDN Academic Alliance website is where IS students and faculty receive the benefits of the Academic Alliance agreement. The functionality of the MSDN Academic Alliance website includes registering eligible students to provide the ability to download software, listing instructions for installing and purchasing software, and explaining Microsoft's privacy policies.

Registration

As previously stated, in order for IS students to download software from a university's MSDN Academic Alliance website, they must be registered for at least one IS credit during the semester they are attempting to download. An IS faculty educator is designated as the MSDN Academic Alliance Program Administrator. Any questions from IS students about eligibility, downloading of software, or the website are directed to contact the Program Administrator (MSDN Academic Alliance Developer Center, 2005).

Downloading Software

IS students must login to the MSDN Academic Alliance website before they are able to download any software. Once logged

in, there is a software product webpage that identifies all of the Microsoft software available for downloading. An IS student selects the desired software product and clicks on the "Get It" button. Then, the student is directed to the download page where they can click on the "Download" button and install their software. E-academy License Management Software is the company providing this distribution system, and the secure process for software downloads (MSDN Academic Alliance Software Center, 2005). The process is very straight forward and easy for both students and the Program Administrator. Student perceptions of this process are discussed later in this article.

Available Software

Any software product available or purchased through the MSDN Academic Alliance program offers the same functionality as a product purchased through the retail market. At the time of this research, the following software packages were available for students to download on our university's MSDN website (MSDN Academic Alliance Software Center, 2005).

- MSDN Library for Visual Studio .NET
- Visual Studio .NET Professional
- Project Professional 2003
- Visio Professional 2003
- Access 2003
- BizTalk Server 2002 Developer Edition
- OneNote 2003
- SQL Server 2000 Developer Edition
- SQL Server 2000 Enterprise Edition
- Virtual PC 2004
- Visual Studio .NET 2003 Professional
- Windows Server 2003 Standard Edition
- Windows XP Professional with SP2

Installing Software

A key is provided to current IS students allowing them to install the software once. Eligible students may install software on two or more computers at once as long as he/she is the owner of both computers and both are being used for instructional purposes. If an additional key for a product is required, the student must contact his/her MSDN Academic Alliance Program

Administrator. Software distribution is restricted to currently eligible students. Friends, family and colleagues not currently enrolled in a IS course are not allowed to access or use the software available from this website (MSDN Academic Alliance Software Center, 2005).

Software Purchases

Eligible students can order a personal copy on CD from the Academic Alliance website. Each product ordered includes a CD-Rom and a license to install it on one computer. The product becomes the property of the student. Each student is limited to purchasing one copy of a product. The product will not terminate or expire simply by virtue of the termination, suspension, or other interruption of the student's status as an enrolled student (MSDN Academic Alliance Developer Center, 2005). An IS student orders a CD by following five easy steps:

1. Log in
2. Select the product
3. Choose a CD Media/Mail Order delivery option
4. Enter his/her shipping information
5. Enter his/her billing information including a credit card number

Academic Alliance Privacy Policy

Microsoft has a privacy policy for their Academic Alliance agreements. The website is exclusively for eligible students of an IS program. The IS educator's Academic Alliance Program Administer creates membership accounts using email accounts of students and faculty who are eligible to access software under the MSDN Academic Alliance program, i.e., registered for one IS credit and have requested the ability to download a product. When a software product is ordered, the website requires the user to supply his/her first and last name as well as their preferred email address, if it is different from their login email address. Other personal information may be collected at other times, such as when a problem is reported, and a record may be kept of that correspondence. In addition, customer traffic patterns and site usage are monitored on a general basis to help develop the design and layout of the Academic Alliance website.

All information collected from an eligible user is used to authenticate them as a member of the MSDN Academic Alliance program. Any information collected is not sold, traded, or rented to any outside entities. The only information shared with any third party is with Microsoft Corporation when a user explicitly requests additional information about Microsoft's products and programs. This shared information includes the user's name and email address only.

Users have the ability to correct or change any information or preferences in their account profile. They may change this information at any time, as long as they are logged in. A user's account can be deactivated or deleted. However, doing so will eliminate their ability to access the members-only area of the academic alliance website. Any order history information will remain in protected permanent records. User information is protected both during transmission and in storage. Account and profile information are password-protected so only the user has access to this personal information. During the software ordering process, the secure server software (SSL) encrypts all inputted information before it is transmitted. All customer data is protected against unauthorized access on the system's secure servers (MSDN Academic Alliance Developer Center, 2005). The privacy policies are a necessary requirement of the MSDN Academic Alliance agreement. However, the policies are not intrusive to the Program Administrator or eligible IS students.

3. METHODOLOGY

As described above, implementing the MSDN Academic Alliance at your university can be done relatively easily and with little cost to IS educators. As a department, we thought it would be interesting to determine how beneficial the IS students found the MSDN Academic Alliance website and software downloaded for classroom and personal use. We formulated some basic research hypotheses and surveyed IS students on how they used the MSDN Academic Alliance website.

There were 372 IS students that downloaded software from the MSDN Academic Alliance website during the spring semester of the

2004-05 academic year. To be selected as potential research subjects, students must have downloaded at least one software package from the MSDN Academic Alliance website. Each prospective subject was sent an email requesting them to fill out an online survey about downloading software from the Academic Alliance website. After one week, a reminder email was sent to all subjects that had not yet completed the survey. There were 187 respondents to the survey for a response rate of 50.27%.

Purpose of Downloaded Software

One of the questions this research hoped to answer was for what purpose were students using the products downloaded from the MSDN Academic Alliance website. Was it for class use or personal use? Since many classes in the IS Department require students to use software from the Academic Alliance website for class purposes, it was hypothesized that...

H1: More than half of the IS students download software from the Academic Alliance website for class use only.

Table 1 shows the breakdown of how students self-reported their usage of the software they downloaded from the MSDN Academic Alliance website.

Table 1. Software Usage

<u>Response</u>	<u>Number in Category</u>	<u>% of Respond</u>
Class use only	49	26.34%
Personal use only	10	5.38%
Both class and personal use	127	68.28%

Although more IS students downloaded software from the Academic Alliance website explicitly for class use only than for personal use only (26.34% to 5.38%), more than 50% (73.64%) of students downloaded software for at least some personal usage. The overwhelming number of IS students that downloaded software for some type of

personal use, caused us to reject hypothesis 1. In some ways, this could be considered a strength of the Academic Alliance for both Microsoft and IS educators. Students are using Microsoft software products and familiarizing themselves with them in their free time. This is an advantage when teaching future courses as well as for Microsoft once these student enters the workforce.

Future Use of Microsoft Software

Obviously, Microsoft has a vested interest in students using their products during their academic career, so that upon graduation they are familiar with them and will want to continue to use them during their employment. It is an interesting research question to ask students if downloading software from the Academic Alliance website influenced their desire to use it in the future, so it was hypothesized that...

H2: Downloading free Microsoft software from the Academic Alliance website will make students more likely to use that software in the future.

Table 2 shows the breakdown of how IS students self-reported their desire to use downloaded software in the future. It is appropriate to code responses on a five-point Likert scale, one through five, so an average score for the response could be computed. If the average score of the respondents fall above the midpoint (3), then there would be support for hypothesis 2. The average response score for this question was 3.79, which does falls above the middle point. Also in support of hypothesis 2, an overwhelming majority (65.24%) of IS students reported the downloading and use of free Microsoft software made them want to use it "a lot" or "very much" in the future. This plays right into the hands of IS educators and Microsoft. The higher the desire to use the products in the future the shallower the learning curve in future courses and greater the future sales for Microsoft.

Table 2. Future Software Usage

<u>Likert Coding</u>	<u>Response</u>	<u>Number in Category</u>	<u>% of Respond</u>
1	Not at all	10	5.35%
2	A Little	12	6.42%
3	Somewhat	43	22.99%
4	A lot	64	34.22%
5	Very much	58	31.02%

Purchased vs. Free Microsoft Software

From the acceptance of hypothesis 2, we can extrapolate that familiarizing and using new software products is very important for IS students. Obviously, Microsoft is a major supplier of these software products. As a follow up to hypothesis 2, we wanted to see if not charging for software encouraged IS students to use it or if they would have purchased the software even if it wasn't available for downloading from the Academic Alliance website, so it was hypothesized that...

H3: The Academic Alliance website provides software to IS students they would not have otherwise purchased for use.

Table 3 shows how students responded to the question, "Would you have purchased the software if it wasn't available for downloading?" Prior to analyzing this data, a threshold of 50% of IS students answering "yes" to this question was set.

Table3. Software Availability

<u>Response</u>	<u>Number in Category</u>	<u>Percentage of Respondents</u>
Yes	34	18.18%
No	153	81.82%

With only 18.18% of respondents indicating they would have still purchased the software if it was not available for downloading, hypothesis 3 was accepted. That is not to say that some student would have found illegal copies of the software to use, but the

MSDN Academic Alliance definitely got students legal copies of Microsoft software that they would otherwise not have purchased. This strengthens the argument that providing software at no cost to students can stimulate an interest that might go unutilized if they needed to purchase the software.

Academic Alliance Website Ease of Use

In support of achieving Microsoft's goal of encouraging students to use their software, it would be important for the Academic Alliance website to be easy to use (Mirville, Cole, and Nelson, 2004). In addition, IS educators should want to make sure students could easily understand the Academic Alliance website. If the website is very usable, it will likely reduce the number of questions IS students need to ask their professors and the faculty Program Administrator, so it was hypothesized that...

H4: The Academic Alliance website is easy for students to use.

Table 4 shows the breakdown of how IS students self-reported the usability of the MSDN Academic Alliance website.

<u>Likert Coding</u>	<u>Response</u>	<u>Number in Category</u>	<u>% of Respond</u>
1	Very difficult to use	4	2.14%
2	Not very usable	11	5.88%
3	Average usability	47	25.13%
4	Pretty easy to use	78	41.71%
5	Very easy to use	47	25.13%

Responses were again coded on a five-point Likert scale one through five so an average score for each response could be computed. The average score was 3.82, which falls

above the middle point of 3, so hypothesis 4 was accepted. Also in support of hypothesis 4, 91.97% of respondents reported at least average usability of the Academic Alliance website with 66.84% of those indicating above average usability. In terms of usability, this is a very high percentage of users being satisfied with the interface's performance.

Informing Students About the Website

Although there are a significant number of students enrolled in IS courses that take advantage of the Academic Alliance software, not all IS students download software from the website. It is important to understand how students learned about the website, so it was hypothesized that...

H5: At least half of IS students who have downloaded software from the Academic Alliance website learned about it from the professor of their IS course.

Table 5 shows the breakdown of how IS students self-reported how they found out about the MSDN Academic Alliance website.

<u>Response</u>	<u>Number in Category</u>	<u>% of Respond</u>
Professor	80	42.78%
Other students in class	12	6.42%
Microsoft's website	0	0.00%
IS Department	74	39.57%
Other	21	11.23%

Since less than half (42.78%) of respondents indicating they learned about the MSDN Academic Alliance website through their professors, hypothesis 5 was rejected. It was interesting to note that about the same number of students learned of the Academic Alliance through the IS department. This most likely indicates the departmental webpage is supplying good

information to the IS students. Also interesting was not a single student reported learning of the Academic Alliance through Microsoft's website. Microsoft's strategy has been to allow the universities to manage the Academic Alliance agreements through their website. Obviously from our data, universities are marketing these agreements to IS students for Microsoft.

Students and Software Usage

As follow up to hypothesis 5, the relationship between where a student learned about the MSDN Academic Alliance website and the purpose that student downloaded software for were investigated by hypothesizing...

H5 a): Students who learned about the Academic Alliance website from their professor(s), primarily downloaded software for class purposes.

H5 b): Students who learned about the Academic Alliance website from other students in their class, primarily downloaded software for personal use.

All of the responses recorded in Table 6 were from students that self-reported they learned about the Academic Alliance website from their professor. Table 6 shows the breakdown of usage of software downloaded for class purposes when IS students learned about the Academic Alliance website from their professor.

Table 6. Software For Class Purposes

<u>Response</u>	<u>Number in Category</u>	<u>% of Respond</u>
Class use only	1	1.25%
Personal use only	27	33.75%
Both class and personal	52	65.00%

Before analyzing our data, we used a generally accepted criterion of at least 75% of students that learned about the Academic Alliance website from their professor would download software for class use. Only 66.25% of students identifying themselves as learning about the MSDN Academic

Alliance from their professor downloaded software for some class purposes. Since we did not meet the agreed upon criterion, hypothesis 5a) was rejected.

The responses recorded in Table 7 are from IS students self-reporting they learned of the Academic Alliance website from other students in class. The breakdown of responses identifies how each respondent used the downloaded software.

Table 7. Software & Personal Usage

<u>Response</u>	<u>Number in Category</u>	<u>% of Respond</u>
Class use only	4	33.33%
Personal use only	1	8.33%
Both class and personal use	7	58.33%

Only one of the twelve students identifying themselves as learning about the MSDN Academic Alliance from other students in class, 8.33%, downloaded software for personal use only. This low percentage caused hypothesis 5b) to be rejected. The results of this hypothesis may need to be looked at again in the future due to the low number of respondents that reported learning about the Academic Alliance website from other students in class.

MSDN Website's Usability

It is likely that students who find the software they downloaded from the Academic Alliance website to be a development tool they would like to use in the future, they will perceive the Academic Alliance as easy to use. There is some support for this in previous research including corporate involvement in education (Clark, 2002). In order to investigate this research question, it was hypothesized...

H6: For students that downloaded software from the Academic Alliance website for "class use only"; the group that identified a "high desire to use the downloaded software in the future," will perceive the Academic Alliance website as significantly easier to use

than the group that identified a "low desire to use the downloaded software in the future".

Hypothesis 6 was examined using a one-way ANOVA and Scheffe follow up tests. The One-Way ANOVA produces a one-way analysis of variance for a quantitative dependent variable by a single factor (independent) variable. The independent variable is the group of students that downloaded software from the Academic Alliance website for "class use only". This group is separated into two sub-groups, those that identified: (1) a high desire to use the downloaded software in the future and (2) a low desire to use the downloaded software in the future. The dependent variable in this analysis is the perception of the ease of usability of the Academic Alliance website. Table 8 identifies the results of the one-way ANOVA.

Table 8. One-way ANOVA: Usability

See appendix A for Table 8.

Scheffe follow up tests were used to further investigate the differences between groups. The Scheffe follow up test has the distinction of being of the safest of all possible post hoc tests due to its extremely cautious method for reducing the risk of a Type I error. The Scheffe test uses an F-ratio to test for a significant difference between any two treatment conditions (Gravetter and Wallnau, 1992). See Table 2 for the results of the Scheffe follow up tests.

Table 9. Scheffe Tests: Usability

See appendix B for Table 9.

The data are a random sample from a normal population. In the population, all cell variances are the same. Analysis of variance is robust to departures from normality, although the data should be symmetric. To check these assumptions, residuals and residual plots were examined.

Because both the one-way ANOVA and Scheffe follow up tests were significant at the .05 level, hypothesis 6 was accepted indicating that for the group of IS students that downloaded software for class use only; those that really wanted to use the

downloaded software perceived the Academic Alliance website significantly easier to use. While those students having a low desire to use the downloaded software in the future had a perception of the website significantly less easy to use. This was not a surprise result as it was assumed those students with a strong desire to use the software from class generally find most applications and graphical user interfaces easier to use.

Reasons for Downloading Software

Those students who are motivated to increase their development skill set are likely to use the software from the Academic Alliance website for both personal and class use. These should be the students Microsoft is targeting as they are most likely to continue using development products after graduation. To investigate this research question, it was hypothesized...

H7: Students that used downloaded software from the Academic Alliance website for "personal and class use" will be significantly more likely to show a desire to use the downloaded software in the future than students that downloaded software for "class use only."

Hypothesis 7 was examined using a one-way ANOVA. The independent variable is the reason why students downloaded software from the MSDN Academic Alliance. They downloaded for either: (1) "personal and class use"; or (2) "class use only". The dependent variable in this analysis is the desire of the students to use software from the Academic Alliance website in the future. Table 10 identifies the results of the one-way ANOVA.

Table 10. One-way ANOVA: Future Use

See appendix C for Table 10.

Because the one-way ANOVA was significant at the .05 level, hypothesis 7 was accepted indicating there was a significant difference in the desire to use software downloaded from the Academic Alliance website in the future between those students that downloaded software for class use only and those that downloaded for both class use and personal use. Again, the acceptance of

hypothesis 7 is not surprising. Those students that use the Academic Alliance software for personal use too, are likely the best students and will be most interested in software development. They are also most likely the ones that will continue to expand their knowledge base after graduation.

4. CONCLUSIONS

Some very simple, yet important conclusions should be drawn from the informational portion of this article. There are great advantages for IS students, IS educators, and Microsoft when an Academic Alliance website is implemented. Students and faculty can use software at no charge and Microsoft can get future developers familiar with their products. The cost benefits are obvious since students can download and use Academic Alliance products for free. Our IS department has been able to procure corporate sponsorship for the yearly MSDN Academic Alliance membership fee, so the entire program comes at no cost to the university. Operating within the terms of the Academic Alliance agreement, we have installed many of these products in our university's Academic Computer Center and our departmental satellite labs. Even though many universities already know about and have entered into Academic Alliance agreements with Microsoft, if this article encourages even one additional IS educator to pursue this relationship, then it has been a worthwhile endeavor.

Obviously, the Academic Alliance is an excellent program for IS educators to participate in. But for those that need additional evidence, this research shows some of the benefits as reported by IS student participants. In addition to the results associated with the individual hypotheses, a few additional conclusions can be extrapolated. When using primarily Microsoft products from the Academic Alliance, faculty should be mindful not to teach the tool, but emphasize conceptual subject matter. In other words, use caution not to become a Microsoft shop. Most academic programs want IS students to be exposed to multiple platforms and development suites. This research specifically identified students using Microsoft products for both class and personal use. This usage encourages them

to continue to use Microsoft's development products in the future. If these future developers have enough leeway to choose their own development tools during their employment, it seems likely they would like to use tools they are familiar with. Without this type of agreement, it is unlikely that students would be purchasing these Microsoft products during their academic careers.

It is important for Microsoft to continue to update their Academic Alliance website and keep it easy for students to use. Microsoft would be wise to continue to foster their relationships with IS Departments and educators. Faculty will continue to use their software during courses and recommend the Academic Alliance website. In addition, students use their informal network to provide information about the benefits of downloading software from the Academic Alliance website. In general, there is no downside to entering into an Academic Alliance with Microsoft and this research only reinforces that conclusion.

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Appendix A

Table 8. One-way ANOVA: Student Download – Usability

		Sum of Squares	df	Mean Square	F	Sig.
Q2	Between Groups	14.331	2	7.165	6.057	.003
	Within Groups	216.492	183	1.183		
	Total	230.823	185			
Q3	Between Groups	.166	2	.083	.564	.570
	Within Groups	26.979	183	.147		
	Total	27.145	185			
Q4	Between Groups	2.773	2	1.386	1.538	.218
	Within Groups	165.012	183	.902		
	Total	167.785	185			

Appendix B

Table 9. Scheffe Follow Up Tests: Student Download - Usability

Depend Variable	(I) Q1	(J) Q1	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Q2	1	2	-.67	.377	.206	-1.60	.26
		3	-.63(*)	.183	.003	-1.08	-.17
	2	1	.67	.377	.206	-.26	1.60
		3	.05	.357	.991	-.83	.93
	3	1	.63(*)	.183	.003	.17	1.08
		2	-.05	.357	.991	-.93	.83
Q3	1	2	.04	.133	.950	-.29	.37
		3	-.05	.065	.705	-.21	.11
	2	1	-.04	.133	.950	-.37	.29
		3	-.10	.126	.745	-.41	.21
	3	1	.05	.065	.705	-.11	.21
		2	.10	.126	.745	-.21	.41
Q4	1	2	-.47	.330	.368	-1.28	.35
		3	-.23	.160	.346	-.63	.16
	2	1	.47	.330	.368	-.35	1.28
		3	.23	.312	.755	-.54	1.00
	3	1	.23	.160	.346	-.16	.63
		2	-.23	.312	.755	-1.00	.54

* The mean difference is significant at the .05 level.

Appendix C

Table 10. One-way ANOVA: Student Download - Future Use

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.849	1	5.849	6.953	.011
Within Groups	39.538	47	.841		
Total	45.388	48			