Internal Evaluation – July 2024

Internal evaluation

The project evaluation plan is wholistic and includes both external and internal components. The internal evaluation components of the overall evaluation plan are focused on the implementation of planned project activities and data collection is focused primarily on the student level. In addition, the internal evaluation includes feedback from whole-Alliance internal trainings, webinars, and other activities in order to provide project and campus leaders with findings that will help them make any modifications as they move forward. The focus of the internal evaluation is on progress toward project goals, including the ongoing recruitment of students and implementation of project interventions. The internal evaluation is guided by the following questions.

1- To what extent are TAPDINTO-STEM students and other personnel participating at alliance institutions?
2 -Which activities and interventions do participants perceive as most valuable?
3 -In what ways might alliance activities be revised to better serve students?

The primary tasks for the internal evaluation include:
-Examining student participation in project activities
-Gathering feedback from students related to the value of project activities
-Gathering feedback from participants engaged in Alliance webinars, trainings and other activities.
-Providing evaluation findings to key alliance personnel so that they can be used as campus leaders to review and refine activities.

Data Collection Methods

Webinar feedback is gathered after the completion on each webinar. Alliance-wide student feedback was initially gathered in spring 2023 through the alliance data portal, housed with the Backbone. These data include student characteristics (e.g., gender, race, ethnicity, type of disability), reported participation in and feedback related to TAPDINTO-STEM Bridge and cluster meetings and other activities, overall Bridge Model and mentoring perceptions, satisfaction and reported outcomes participants attribute to their involvement in the project, self-advocacy and belongingness).

In Fall 2023, two forms were created to gather feedback from students and faculty mentors. These forms were administered online using *Qualtrics*. The data portal is no longer being used to gather data for the internal evaluation. Ongoing feedback will be gathered from students and faculty mentors online, as in Fall 2023.

Findings

The findings regarding feedback from participants in Alliance internal trainings, webinars, and the Alliance-wide Convening held at UMKC in March 2023 and 2) were reported in the year 2 annual report. This report is focused on student feedback related to their experiences as TAPDINTO-STEM students from spring 2023 and fall 2023. .

Internal Evaluation Findings

Spring 2023 -The SOAR data portal (https://tapdintostem.org/soar_portal_links/) was developed and launched by the backbone at UMKC to facilitate data collection in the TAPDINTO-STEM Alliance. The findings summarized in this report are from the use of the SOAR portal. Two data collection requests were made. An initial request was made in Feb 2023 to gather perceptions of student reflections of their experiences during the Fall semester and a subsequent request was made May to learn more about the issues of self-advocacy and belongingness as these issues were described by students and others at the Convening in March.

Fall 2023 – In the fall 2023 semester, the requestion for internal evaluation data was not linked to the portal. This request was made by the internal evaluator using a Qualtrics form. In order to minimize the demand on respondents, a matrix sampling approach was used. More specifically, all students were asked to respond to items focused of demographics, issues related to disability, Bridge and cluster involvement and perceived outcomes and mentoring experiences. Other blocks of items related to belongingness, persistence and career preparation were randomly assigned.

Spring 2023 Sample – All students registered (n=128) in the SOAR portal as of January 2023 were invited to respond to the internal evaluation items. Reported student characteristics are summarized in the table below. The typical TAPDINTO-STEM student identified as female (59.5%), white (57.8%), and non-Hispanic or Latino (78.9

Fall 2023 Sample – A total of 131 students responded to items related to student characteristics. Much like the spring 2023 sample, the typical respondent identified as female (56.5%), white (62.6%), and non-Hispanic or Latino (80.2%).

Spring 2024 Sample – A total of 104 students responded in spring 2024. As with prior semesters, the typical respondent identified as female (56.3%), white (63.,5%) and non-Hispanic (75%)

Student Characteristics		**Spring 2023 (n=128) N (%)**	**Fall 2023 (n=131) N (%)**	**Spring 2024 (N=104) N (%)**
Hub	Islands	8 (6.3%)	13 (9.9%)	13 (12.5%)
	West Coast	31 (24.2%)	33 (25.2%)	26 (25%)
	Mountain	11 (8.6%)	16 (12.2%)	12 (11.5%)
	Midwest	13 (10.2%)	15 (11.5%)	16 (15.4%)
	Northeast	26 (20.3%)	13 (9.9%)	11 (10.6%)
	Southeast	37 (28.9%)	41 (31.3%)	26 (25%)
	Not reported	2 (1.6%)	0	0
Gender/Preferred Pronoun	Female (she)	76 (59.5%)	74 (56.5%)	58 (56.3%)
	Male (he)	33 (25.8%)	39 (29.8%)	33 (31.7%)
	They	NA	14 (10.7%)	9 (8.7%)
	Gender-non-conforming	13 (10.2%)	NA	NA
	Trans-female	2 (1.6%)	NA	NA
	Trans-male	2 (1.6%)	NA	NA
	Prefer not to answer	2 (1.6%)	3 (2.3%)	2 (2.9%)
Race	American Indian	5 (3.9%)	5 (3.8%)	4 (3.8%)
	Asian or Pacific Islander	17 (13.3%)	20 (15.3%)	16 (15.4%)
	Black or African American	20 (15.6%)	21 (16.0%)	21 (20.2%)
	Native Hawaiian/Pac Isl.	5 (3.9%)	5 (3.8%)	3 (2.9%)
	White	74 (57.8%)	82 (62.6%)	66 (63.5%)
	Multi-racial	7 (5.5%)	7 (5.3%)	4 (3.8%)
	Prefer not to answer	11 (8.6%)	8 (6.1%)	6 (5.8%)
Ethnicity	Hispanic or Latino	22 (17.2%)	20 (15.3%)	22 (21.2%)
	Not Hispanic or Latino	101 (78.9%)	105 (80.2%)	78 (75%)
	Prefer not to answer	5 (3.9%)	6 (4.6%)	4 (3.8%)
Transfer Student	No	90 (70.3%)	Not	Not requested
	Yes	38 (29.7%)	requested	
Year	Freshman	13 (10.2%)	14 (10.7%)	9 (8.7%)
	Sophomore	37 (28.9%)	25 (19.1%)	28 (26.9%)
	Junior	36 (28.1%)	38 (29.0%)	33 (31.7%)
	Senior	37 (28.9%)	48 (36.6%)	27 (26%)
	Graduate Student	5 (3.9%)	4 (3.1%)	6 (5.9%)
	Not reported		2 (1.5%)	1 (1%)
Veteran	No	123 (96.1%)	Not	Not requested
	Yes	5 (3.9%)	requested	
Parent/Household Income	Less than 20K	11 (8.6%)	Not	Not requested
	Between 20K and 40K	20 (15.6%)	requested	
	Between 40K and 60K	9 (7.0%)		
	Between 60K and 80K	10 (7.8%)		
	Between 80K and 100K	7 (5.5%)		
	Greater than 100K	18 (14.1%)		
	Don’t know.	39 (30.5%)		
	Prefer not to answer	14 (10.9%)		

Disability Conditions and Accommodations

Spring 2023 -A total of 60 students responded to items related to their disclosed disability and accommodations. Of these 60 students, 55 (91.7%) indicated that they formally registered and disclosed their disability at their college of university. Students were most likely to disclose psychological/psychiatric conditions (43.3%) and learning disorders (40%).

Fall 2023 – A total of 113 students responded to items related to their disclosed disability ion the fall 2023 survey. Of these 113 students, 102 (90.3%) formally disclosed their disability and registered with their college/university office. Over half (54.9%) disclosed Attention Deficit Disorder (ADD)/Hyperactivity (ADHD). Other types of disabilities frequently disclosed included psychological/psychiatric conditions (36.3%), Asperger's Syndrome/Autism Spectrum (24.8%) and systemic health/medical conditions (20.4%).

Spring 2024 – In spring, 90.4% indicated that they formally disclosed a disability. As in fall, the most frequently disclosed disabilities were ADD/ADHD (45.2%) and psychological/psychiatric conditions (30.8%).

	SP2023 (n=60)		**F2023 (n=113)**		**Spring 2024 (n=102)**	
Activity/Service	**N**	**Percent**	**N**	**Percent**	**N**	**Percent**
Registered and disclosed disability	55	91.7%	102	90.3%)	94	90.4%
Disclosed Disability Type(s)						
Acquired / Traumatic Brain Injury	5	8.3%	6	5.4%	7	6.7%
Asperger's Syndrome/Autism Spectrum	13	21.7%	28	24.8%	16	15.4%
Attention Deficit Disorder/Hyperactivity	2	3.3%	62	54.9%	47	45.2%
Deaf or Hard of Hearing (D/HoH)	0	0	7	6.2%	9	8.7%
Physical Impairment/Mobility Impairment	10	15.7%	16	14.2%	9	8.7%
Systemic Health / Medical Condition	11	18.3%	23	20.4%	15	14.4%
Psychological / Psychiatric Condition	26	43.3%	41	36.3%	32	30.8%
Learning Disorder	24	40.0%	20	17.7%	18	17.3%
Blind or Visual Impairment	2	3.3%	6	5.3%	10	9.6%
Speech Impairment	1	1.7%	2	1.8%	5	4.8%
Prefer not to answer.	3	5.0%	2	1.8%	0	0
Other	4	6.7%	16	14.2%	14	13.5%

Accommodations

Spring 2023 – A short list of accommodations was used in spring 2023 and students were asked to indicate the extent to which they used each. Most often used accommodation or services included exam accommodations (M=4.54), help with accommodation memos (M=4.02) and preferred seating (M=3.59).

Spring 2023		
Disability and Accommodation Services	**N**	**Mean[a] (SD)**
Exam accommodations	48	4.54 (.849)
Help with my accommodation memo	53	4.02 (1.08)
Preferred Seating	29	3.59 (1.66)
Alternative formats for course materials	32	3.22 (1.54)
Reader/Scribe Services	19	3.00 (1.67)
Early access to course materials	28	2.93 (1.72)
Note-taking services	23	2.87 (1.66)
a-Response scale (1=not at all, 5=A great extent)		

Fall 2023 – In fall, a longer list of accommodations was included. For each accommodations, students were asked to indicate whether they had used it, planned to use it and did NOT plan to use it. Over 50% of those responding reported using online submission for the accommodation request (79.8%), exam accommodations (77.8%), extended time on assignments or exams (77.3%), online scheduling for proctored exams (55.2%) meeting with a disability specialist (54.4%), and permission to record classes (50.6%).

Spring 2024 – In spring, students were asked to indicate the extent to which they used each service/resource (1=not at all, 5=A great extent). Most frequent use was reported in relation to online submission of the accommodation memo (M=3.81), exam accommodations (M=3.58), extended time on assignments or exams (M=3.53) and priority registration (M=3.02) while least frequent use was reported for course waivers or substitutions (M=1.42), ASL or CART (M=1.49), and reduced courseloads (M=1.56).

	Fall 2023			Spring 2024		
Disability and Accommodation Services		**YES, have used**	**PLAN to use**		**Extent of Use**	
	N	N(%)	N(%)	N	Mean	SD
Online submission of accommodation request	89	71 (79.8%)	3 (3.4%)	73	3.81	1.655
Meeting with a disability specialist	90	49 (54.4%)	12 (13.3%)	69	2.67	1.686
Exam accommodations	90	70 (77.8%)	8 (8.9%)	76	3.58	1.699
Reader or Scribe services	88	4 (4.5%)	7 (8.0%)	66	1.88	1.494
Online scheduling for proctored exam	87	48 (55.2%)	15 (17.2%)	67	2.69	1.844
Note-taking services	89	28 (31.5%)	11 (12.4%)	74	2.34	1.581
Copies of notes from classmate	90	35 (38.9%)	10 (11.1%)	71	2.30	1.553
Access to Assistive Technology	89	21 (23.6%)	14 (15.7%)	65	2.17	1.645
ASL or CART	88	36 (40.9%)	12 (13.6%)	61	1.49	1.149
Permission to record class lectures/sessions	88	45 (50.6%)	18 (20.2%)	67	2.51	1.636
Alternative formats for tests (e.g. audio books)	88	21 (23.9%)	10 (11.4%)	67	1.93	1.540
Priority registration	89	43 (48.3%)	11 (12.4%)	65	3.02	1.875
Preferred seating or adaptive furniture	88	31 (35.2%)	8 (9.1%)	63	2.08	1.495
Reduced courseload	89	8 (9%)	20 (22.5%)	62	1.56	1.210
Early access to course content	89	16 (18.2%)	24 (27.3%)	60	1.62	1.209
Assistance with academic issues (e.g., withdrawals, appeals)	90	29 (32.2%)	13 (14.4%)	64	2.06	1.511
Extended time on assignments or exams	90	66 (73.3%)	8 (8.9%)	73	3.53	1.651
Alternative exam formats	88	13 (14.8%)	16 (18.2%)	62	1.81	1.458
Permission to leave class (temporarily) if needed	88	36 (40.9%)	12 (13.6%)	66	2.32	1.609
Course waivers or substitutions	88	6 (6.8%)	10 (11.4%)	57	1.42	1.085
Use of calculator or laptop in class or for assignments	89	20 (22.5%)	13 (14.6%)	66	2.23	1.717

Self-Advocacy Behaviors

A request was made in May 2023 to learn more about issues related to self-advocacy and belongingness. These findings are summarized in the following section. In the initial administration of this scale, 2 items were inadvertently left out but the fall survey included the full scale.

Generally, student responses were positive with 13 of the 16 averaging above the scale midpoint of 3 in spring and 17 of 18 above 3.0 in fall 2023 and spring 2024. Over the 2023-24 academic year, students most strongly agreed that they were able to clearly explain their disability (M=4.03 in fall, M=4.20 in spring), they don't use their disability as an excuse (M=4.14 in fall, M-3.98 in spring), they can explain their strengths and weaknesses (M=3.94 in fall, M=4.21 in spring), they ask faculty for approved accommodations (M=4.07 in fall, M=3.94 in spring), and they don't allow the violation of their rights as a SWD stop them from working toward their educational goals (M=3.98 in fall, M=4.04 in spring).

	Spring 2023			Fall 2023			Spring 2024		
Self-Advocacy Behaviors	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**
I allow the violation of my rights as a SWD to stop me from working toward my educational goal (Reverse coded)		NA		86	3.98	1.12	79	4.04	1.192
I am able to clearly explain what my disability is	43	3.58	1.295	91	4.03	1.02	85	4.20	1.033
I apologize to teachers when requesting my approved accommodations. (Reverse coded)	44	2.39	1.145	89	3.09	1.36	83	3.17	1.395
I ask teachers to provide my approved accommodations.	44	3.36	1.296	89	4.07	.986	84	3.94	1.034
I ask the appropriate office to assist me in resolving problems with my teachers.	44	3.59	1.168	84	3.74	1.09	77	3.60	1.173
I can explain my strengths and weaknesses.	44	3.00	1.364	88	3.94	.939	84	4.21	.879
I discuss my disability with other students.	44	3.48	1.171	89	3.53	1.24	84	3.50	1.285
I explain my disability to my teachers.	43	3.91	.971	87	3.26	1.19	82	3.22	1.324
I know about resources that are available to all students.	44	3.48	1.320	87	3.76	1.05	83	3.75	1.103
I let teachers know immediately about the specific accommodations I will need in their class.	44	3.52	1.110	88	3.72	1.18	84	3.79	1.173
I manage my time in order to coordinate my disability related needs.	44	3.25	1.383	89	3.74	1.14	85	3.68	1.157
I manage my time in order to fulfill study needs.	44	3.41	1.127	89	3.71	1.13	84	3.87	1.073
I meet with my teachers at the beginning of the semester to discuss my approved accommodations.	44	3.80	1.091	86	3.24	1.34	83	3.33	1.326
I talk with someone when I get frustrated about problems related to my disability.	44	3.64	1.123	86	3.35	1.18	85	3.35	1.251
I use my disability as an excuse when I don't perform to my fullest potential (Reverse coded)		NA		88	4.14	.961	83	3.98	1.209
If a teacher forgets to comply with my approved accommodations, I remind him or her.	44	3.48	1.210	87	3.48	1.21	80	3.64	1.094
If a teacher refuses or forgets to provide my approved accommodations, I just accept it and do my best without his or her help. (Reverse coded)	44	2.77	1.291	88	3.49	1.25	81	3.54	1.388
If necessary, I tell my teachers over and over how to meet my needs.	44	2.48	1.486	85	2.86	1.17	79	2.81	1.26
TOTAL SCALE	44	**3.31**	.537	91	**3.62**	.588	85	**3.64**	.622
Scale (SD, D, N, A, SA)									

SWD Issues

In addition to items focused on self-advocacy, 7 items focused on issues and potential challenges for students with disabilities were included in fall 2023**.** These responses are summarized in the table below. Overall, students believed they could face these issues with the overall scale averaging 3.25 in fall and M=3.28 in spring. Students most strongly agreed that faculty are willing to provide reasonable accommodations (M=4.07 in fall, M=4.04 in spring), they know how to interact with faculty to present their accommodation memo (M=3.75 in fall, M=3.74 in spring) and they are comfortable telling faculty about their disability (M=3.70 in fall, M=3.85 in spring). On the other hand, students feel different from others because of their disability and believe that their peers don't understand their abilities (M=2.12 in fall, M=2.35 in spring).

	Fall 2023			**Spring 2024**		
	N	**Mean**	**SD**	**N**	**Mean**	**SD**
Faculty are willing to provide reasonable accommodations outlined in my accommodation memo	106	4.07	.843	93	4.04	.932
I am comfortable telling faculty I have a disability	107	3.70	1.109	93	3.85	1.12
I am concerned that telling faculty and others about my disability will affect their attitude toward me (r)	107	2.80	1.21	93	2.67	1.22
I know how to interact with faculty to present my accommodation memo and explain my learning needs	104	3.75	.973	93	3.74	1.04
I often feel different from other students because of my disability (r)	106	2.12	.983	93	2.35	1.19
My peers don't understand my abilities (r)	105	2.60	1.01	92	2.74	1.09
Peers avoid or have limited interactions with me because of my disability.(r)	104	3.66	1.06	91	3.60	1.28
TOTAL SCALE	104	**3.25**	.626	93	**3.28**	.679
Scale (SD, D, N, A, SA)						

Mentoring Perceptions and Satisfaction

Mentoring Satisfaction – Overall, students were very generally satisfied with the mentoring experience with all items averaging above 3.75 in fall and spring and the overall scale average improving from 3.99 in fall to 4.01 in spring. Over the 2-023-24 academic year, students expressed their greatest satisfaction in relation to their mentor's ability to help them (M=4.14 in fall, M=4.11 in spring), their relationship with their mentor (M= 4.03 in fall, M=4.12 in spring) and the overall mentoring experience (M=3.98 in fall, M=4.08 in spring).

	Fall 2023			Spring 2024		
Satisfaction with Mentoring	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**
How satisfied were you with the number of times you communicated with your mentor each week?	63	3.97	1.08	65	3.80	1.35
When you met with your mentor, how satisfied were you with the length of the sessions?	63	3.97	1.09	65	3.97	1.31
How satisfied are you with the progress you made this semester through mentoring?	63	3.89	1.09	65	3.95	1.24
How satisfied are you overall with the mentoring experiences you have had?	63	3.98	.959	65	4.08	1.25
How satisfied are you with your mentor's ability to help you?	63	4.14	.981	65	4.11	1.28
How satisfied are you with your relationship with your mentor?	63	4.03	1.05	65	4.12	1.29
TOTAL SCALE	63	**3.99**	.954	65	**4.01**	1.22
Scale (1=not at all, 5=A great extent)						

Mentoring Perceptions – Overall, students expressed very favorable perceptions of the mentoring process with the overall scale averages increasing from 3.84 in fall to 3.98 in spring with just 4 items averging above 4 in fall and 13 in spring. Over the academic year, students most strongly agreed that they felt respected and supported during their mentoring time (M=4.11 in fall, M=4.22 in spring), their mentor listened to their issues and concerns (M=4.06 in fall, M=4.18 in spring), they got the help they needed (M=4.03 in fall, M=4.18 in spring) and their mentor provided constructive feedback (M=4.05 in fall, M=4.10 in spring).

	Fall 2023			Spring 2024		
	N	**Mean**	**SD**	**N**	**Mean**	**SD**
My mentoring experience has helped me to better organize my time	66	3.64	1.00	70	3.69	.894
My mentoring experience has improved my ability to communicate about my disability needs.	66	3.76	.978	70	3.87	.916
Mentoring has helped me better understand STEM opportunities.	66	3.77	.941	70	3.99	.955
My mentoring experience has increased my confidence that I can be successful in STEM courses.	66	3.74	.950	70	4.03	.932
I am more interested in STEM classes because of mentoring.	66	3.53	.898	70	3.70	1.01
During mentoring I have talked about career and life goals.	66	3.89	.963	70	4.00	.948
I feel comfortable approaching my mentor with any questions I might have.	66	3.98	.936	70	4.13	.916
Mentoring has helped me learn and grow as a STEM student.	65	3.89	.904	69	4.07	.944
I am satisfied with my mentoring experience.	65	3.98	.960	70	4.13	.931
My mentor understands my struggles.	65	3.86	.933	68	4.12	.985
I think my mentor and I are a good match for each other.	65	3.92	.957	68	4.06	.960
My mentoring experience has encouraged me to push beyond what is comfortable or easy for me	65	3.77	.948	68	4.03	.946
My mentor encourages me to share my thoughts and feelings.	65	3.94	.899	68	4.10	.949
I have been able to get the information and resources I need.	65	3.92	.941	68	3.96	.953
Mentoring has helped me solve problems I may have.	65	3.80	.955	68	3.96	.969
My mentoring experience has helped me to make good decisions.	64	3.81	.906	66	3.95	.902
Using social networks (such as Facebook, Twitter, email, Skype) helped me build a relationship with my mentor.	65	3.14	1.29	68	3.34	1.25
I take an active part in the mentoring sessions by participating in activities and sharing my ideas and questions.	65	3.94	.747	68	3.94	.912
During mentoring I have felt respected and supported.	65	4.11	.904	68	4.22	.960
I am able to get help through mentoring when I need it.	65	4.03	.901	68	4.18	.945
My mentor listens to my issues and concerns	65	4.06	.882	68	4.18	.945
My mentor provides constructive feedback to me.	65	4.05	.909	68	4.10	.917
TOTAL SCALE	66	**3.84**	.782	71	**3.98**	.811
Scale (SD, D, N, A, SA)						

Please describe specific ways in which you benefited from being mentored in the mentoring process this past semester.

Fall 2023 (n=30)	Spring 2024 (n=28)
-time management -Study sessions -Speaking out ideas and discussing them -Showing me different ways of research and on how to study! -She was able to help with my classes and discuss my disability with her as well -She has helped be build up the courage to advoate for myself -Navigating workload and scheduling. Guidance and support through difficult situations with professors and pers. -My mentor has sent out a lot of good optional resources that I wouldnt have otherwise discovered or known about. -Learning more about getting a PhD and how the application process works. -Just being able to meet and talk with someone. -Jade (NAU) had helped me immensely, she is the person I went to when I didn't know where else to go or how to get help concerning my grades and she also helped me leave an internship that wasn't accommodating my needs and schedule. Overall, I've never really had a mentor before but Jade is excellent and has helped me so much. -It helped me grow as a person outside campus -It help me to get to my step to start to look at nursing programs -internship opportunities, getting into a professors lab, networking -Insights to financial resources on campus and other places I haven't explored/thought about that might benefit me on campus -Increasing productivity and social well being -I'm not failing Chemistry! -I struggle with recognizing when to use certain equations in math and she is helpful in helping me identify when to use what -I learned about inter rater reliability and statistics used for studies. -I have figured out what I want to do in regards to graduate school and finding a job.	-Peer lunches, on campus connection building -Oh dear I'm not sure if I even have a "mentor" per se :/ -My mentor on campus helped me with my time management skills and study habits. -My mentor is very motivating, and helps reassure me that I can finish what I've started, and is not forcing me to commit to a regular schedule or looking down on me for the amount of time it's taken me to move forwards in my degree path. My mentor has also helped me to gain experience in new fields I'd never would've entered without their permission, and helped me to gain skills which I sought to gain through school, but originally was unable to because of my failing of "core" classes which held me back from experiencing the classes I wanted to participate in. -My mentor is very helpful, knowledgeable, and kind! I am very grateful for him providing me with this scholarship and mentoring opportunity. I think it's a wonderful resource for disabled students, and the work being done by the faculty to help is amazing. Thank you all so much! :) -My class grades have increased -Learn to become a leader -Jade helped me find and apply for internship/fellowship opportunities after I expressed my fear that it might be too late to apply for summer programs. She sent me a plethora of different programs that were stillmaccepting applications and is still doing so now so that I'm able to get "real-world exerience" which is something I was worried about. Additionally, she helped me figure out ways to deal with a professor that I was having a hard time with and we came up with a plan to see her the least amount of time as possible without jeopardizing my learning career. -It made me more comfortable to just be myself in front of my mentor. -I think it's been really helpful having someone to talk to that really understands what I'm going through. I do wish that we met more often, but a lot of that has to do with my availability. Either way, I feel a

-I felt heard and validated by my mentor which boosted my confidence in my self and my abilities. -I do not believe I have a mentor unless you mean the professor leading the bridge meetings -Having someone to relate to -Hands on more direct attention helps me focus. experience -Everything benefited me, also the meeting aswell -Encouragement and motivation has been the biggest ones. -Being able to see that my struggles are similar to other peoples and how to deal with them -Andrew helped me learn about inter rater reliability for my research project and talked with me about the woes of IRBs -Have been informed of valuable resources that are available both on and off campus that have helped me overcome barriers and challenges that have been presented to me •introduced me to staff and faculty have helped encouraged me and inspired me to continue my hard work and efforts	lot more comfortable actually utilizing my resources here at UMKC. -I prefer bridge meetings with faculty mentors over cluster meetings with peers. I feel that our faculty mentors are better prepared and closely follow an agenda that usually includes a group activity. There is a sense of purpose at bridge meetings that allows for a more focused discussion and self-reflection. Being mentored by faculty also allows us an opportunity to hear about research experiences and opportunities. -I learned more about communicating with professors and peers can lead to a better understanding with topics being discussed in class. -I cemented my expectations. -I am able to utilize better study skills and systems. I am more likely to ask for help when I need it instead of sucking it up. I have found a place where I can share my through, feelings, and ideas. I have made more friends and am more open about my disability. -Helped with time management, scheduling, and accountability. -Helped me ready myself for my future plans in school and later in life. -Helped me address a conflict with grant funding, and plan events and learn how to deal with spontaneous speaking -having someone to look up to and follow in their path keeps me motivated -Focusing on classes -Finding new opportunities and places to maximize my skill sets and learn was the most valuable part about mentoring to me. -Emailing and Zoom meetings helped the most. -Deaf communication -Being able to talk about my disabilities have affected me -Being able to openly talk about my experiences as a disabled student in STEM and be heard has been a highlight of TAPDINTO-STEM for me. -Being able to have someone to relate to -Accepted constructive criticism, advice, personal stories. -Academic Tutoring, Mentoring for my bird project, Help test accommodations -Academic Tutoring, Mentoring.

Program Belongingness, Bridge Model Engagement and Perceived Outcomes

Program Belongingness – Students reported a strong sense of belonginess in relation to the TAPDINTO-STEM program, increasing from 4.18 in fall to 4.34 in spring. They reported being glad to be part of the program (M=4.51 in fall, M=4.66 in spring), being accepted in the program (M=4.49 in fall, M=4.66 in spring), supported in the program (M=4.47 in fall, M=4.52 in spring), feeling wanted and accepted by the leaders of the program (M=4.46 in fall, M=4.51 in spring) and committed to the program (M=4.44 in fall, M=4.52 in spring).

	Fall 2023			Spring 2024		
	N	**Mean**	**SD**	**N**	**Mean**	**SD**
I have many friends in this program	107	3.09	1.31	88	3.31	1.37
I feel comfortable in the program	107	4.36	.804	87	4.45	.774
The leaders in this program make me feel wanted and accepted.	105	4.46	.809	87	4.51	.761
I feel like I am an important member of this program.	107	4.00	1.15	87	4.29	1.07
I am glad to be part of this program.	108	4.51	.704	87	4.66	.626
I am liked by other students in this program	107	3.93	.984	87	4.28	.845
I am part of this program	109	4.36	.898	87	4.54	.712
I am committed to this program.	108	4.44	.765	87	4.52	.729
I am supported at this program.	107	4.47	.781	87	4.52	.833
I am accepted at this program.	108	4.49	.730	87	4.66	.644
TOTAL SCALE	110	**4.18**	.769	88	**4.34**	.748
Scale (SD, D, N, A, SA)						

Program (Bridge) Engagement – Students reported being more engaged in the Bridge Model over the 2023-24 academic year, with the overall scale increasing from 3.83 to 3.94 and all items averaging higher in spring. Students look forward to meeting with other students in the project (M=4.22 in fall, M=4.23 in spring), value the experiences they have in this project (M=4.14 in fall, M=4.21 in spring), find Bridge meetings to be of great value and worth their time (M=3.99 in fall, M=4.07 in spring), the topics to be of great interest to them (M=3.96 in fall, M=3.98 in spring) and reported the time they spent related to project activities to be rewarding (3.93 in fall, M=4.19 in spring).

	Fall 2023					
	N	**Mean**	**SD**	**N**	**Mean**	**SD**
I have actively participated in the monthly Bridge meetings.	108	3.91	1.235	97	4.12	1.218
I have found Bridge meetings to be of great value to me	106	3.99	1.046	96	4.08	1.053
I look forward to meeting with other students in this project.	110	4.22	.990	96	4.23	.946
The topics addressed in large group Bridge meetings have been of great interest to me.	106	3.96	1.059	95	3.98	.978
I have actively participated in the weekly cluster meetings.	105	3.30	1.331	94	3.48	1.350
Meeting students in clusters have allowed for discussions of critical issues	106	3.51	1.140	94	3.72	1.222
It is worth my time to participate in Bridge or Cluster meetings	107	3.99	1.095	95	4.07	1.064
Project activities (e.g., Bridge and cluster meetings) have focused on issues that will help me complete my degree.	107	3.74	1.076	96	3.80	1.211
Project activities (e.g., Bridge and cluster meetings) have focused on issues that will help me get an internship or job.	108	3.72	1.118	96	3.76	1.158
I value the experiences I have had in this project	108	4.14	.981	95	4.21	1.061
The time I have spent related to project activities has been rewarding.	108	3.93	1.074	96	4.19	.998
TOTAL SCALE	111	**3.83**	.905	97	**3.94**	.898
Scale (SD, D, N, A, SA)						

Perceived Outcomes - Students reported many perceived benefits from their participation in the project with the overall scale average increasing from 3.21 in fall to 3.29 in spring and 16 of the 20 items averaging above the scale midpoint. Overall, students reported the greatest benefits related to commitment and confidence to complete their degree, learning about valuable resources at their institution, developing closer relationships with faculty, and improving their collaboration skills all averaging 3.5 or above each semester.

	Fall 2023			Spring 2024		
	N	**Mean**	**SD**	**N**	**Mean**	**SD**
I increased my social (peer) support network	88	3.36	1.22	83	3.48	1.25
I learned more about resources available to me at my institution	88	3.60	1.08	83	3.73	1.20
I improved my time management skills	88	3.02	1.13	82	3.16	1.20
I learned more about career opportunities in my field	87	3.29	1.22	83	3.46	1.36
I developed closer relationships with faculty	86	3.55	1.19	83	3.66	1.30
I gained valuable knowledge related to my academic major	87	3.22	1.21	83	3.34	1.31
I learned more about research in my field	87	3.28	1.26	83	3.16	1.43
I improved my writing skills	83	2.63	1.34	83	2.72	1.35
I learned more about Graduate School opportunities	86	3.21	1.38	83	3.06	1.47
I improved my ability to conduct literature reviews.	86	2.50	1.38	83	2.49	1.42
I learned and improved my ability to write research proposals	86	2.56	1.52	82	2.44	1.49
I improved my teamwork skills	86	3.30	1.33	82	3.48	1.33
I improved my leadership skills	87	3.28	1.40	82	3.50	1.39
I improved my ability to effectively collaborate with peers	86	3.55	1.26	83	3.59	1.28
I increased my commitment to completing my degree	86	3.67	1.25	83	3.82	1.32
I am better prepared for a potential internship	86	3.42	1.29	82	3.57	1.38
I improved my academic and study skills	86	3.23	1.31	83	3.36	1.36
I am more interested in a study abroad experience	86	2.56	1.55	82	2.40	1.53
I am better able to help (mentor) others	87	3.43	1.25	83	3.55	1.33
I am more confident that I will complete my degree program	88	3.59	1.24	83	3.92	1.33
TOTAL SCALE	88	**3.21**	.976	83	**3.29**	1.05
Scale (1=not at all, 5=A great extent)						

Relationships with Project/Bridge Engagement

Relationship with project (Bridge) engagement were explored and are summarized in the table below. Of the 13 variables examined in relation to perceived outcomes, 7 were statistically significant ($p<.05$) each semester. More specifically, students who reported being more actively engaged also reported:

- more positive outcomes (Fall and Spring)
- a greater sense of belonging in the TAPDINTO-STEM program (Fall and Spring)
- more positive perceptions or and satisfaction with the mentoring process (Fall and Spring)
- more confidence to face potential issues and challenges in college (Fall and Spring)
- greater confidence in career skills and overall career readiness (Fall)
- greater academic efficacy (Spring)
- a stronger intention to persist (Spring)

Relationships with Project (Bridge) Engagement						
	Fall 2023			**Spring 2024**		
	n	**Pearson *r***	***p***	**n**	**Pearson *r***	***P***
Perceived Outcomes	88	**.388**	<.001	83	**.538**	<.001
Mentoring Perceptions	64	**.395**	.001	70	**.458**	<.001
Mentoring Satisfaction	61	**.465**	<.001	63	**.416**	<.001
Program Belongingness	102	**.579**	<.001	81	**.721**	<.001
University Belongingness	23	.217	.320	21	.338	.134
Self-Advocacy Behaviors	77	.167	.147	79	-.095	.404
Overall Issues and Challenges	101	**.227**	.022	81	**.336**	.002
Academic Efficacy	101	.158	.114	81	**.312**	.005
Intent to Persist	100	.186	.063	81	**.274**	.013
College Persistence	26	.152	.459	17	.048	.856
Career Efficacy	18	.337	.172	21	.277	.224
Career Readiness	18	**.636**	.005	21	.117	.614
Career Confidence	15	**.559**	.030	18	-.083	.743

Other Issues and Challenges

Academic Efficacy –Students expressed high levels of academic efficacy with all but one item averaging over 4.0 fall and spring and the overall scale average increasing from 4.13 in fall to 4.33 in spring. TAPDINTO-STEM students most strongly agreed that their goal was to learn as much as they could (M=4.39 in fall.=4.52 in spring), it is important to learn a lot of new things (M=4.33 in fall, M=4.51 in spring), improving technical skills was one of their goals (4.19 in fall, M=4.39 in spring), and they believed they could do all the work in the classes if they didn't give up (M=4.06 in fall, M=4.36 in spring).

	Fall 2023			Spring 2024		
Academic Efficacy	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**
I'm-sure-I-can-learn-everything-taught-in-my-major-classes--	109	3.74	1.092	85	3.93	1.033
I-can-do-all-the-work-in-these-classes-if-I-dont-give-up--	109	4.06	.989	86	4.36	.684
Even if the work is hard, I can learn it.	109	4.10	.849	86	4.31	.771
Its-important-to-me-to-learn-a-lot-of-new-things-in-my-classes--	109	4.33	.594	86	4.51	.609
Improving-my-technical-skills-is-one-of-my-goals-	108	4.19	.833	85	4.39	.725
My-goal-in-my-major-classes-is-to-learn-as-much-as-I-can-	109	4.39	.637	85	4.52	.648
TOTAL SCALE	109	**4.13**	.638	86	**4.33**	.581
Scale (SD, D, N, A, SA)						

Intent to Persist – Students also expressed a very strong intention to persist, averaging 4.39 in fall and 4.44 in spring. They strongly agreed that they would continue to enroll in courses in their current discipline the nest semester (M=4.76 in fall, M=4.73 in spring) and the next year (M=4.69 in fall, M=4.72 in spring). They also strongly intend to get their degree in their current major (M=4.77 in fall, M=4.74 in spring), get a job in the field (M=4.54 in fall, M=4.58 in spring), and could see themselves working in the field for quite a while (M=4.46 in fall, M=4.53 in spring).

	Fall 2023			Spring 2024		
Persistence	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**
Next-semester-I-plan-to-continue-taking-courses-in-my-major-discipline	99	4.76	.716	81	4.73	.671
Next-year-I-plan-to-take-courses-in-my-major-discipline	91	4.69	.770	82	4.72	.690
I-intend-to-get-my-degree-in-my-current-major	107	4.77	.681	84	4.74	.696
I-plan-to-apply-for-an-advanced-degree-program-in-my-major-field	97	3.92	1.367	77	4.03	1.181
I-intend-to-get-an-advanced-degree-in-my-major-field	100	3.84	1.434	80	4.04	1.247
I-will-continue-my-education-in-my-major-field	106	4.22	1.130	83	4.35	1.109
I-intend-to-get-a-job-in-my-major-field	106	4.54	.886	85	4.58	.836
I-can-see-myself-working-in-this-field-for-quite-a-while	106	4.46	.968	85	4.53	.839
I-plan-to-devote-my-career-to-my-current-major-discipline	106	4.42	.984	84	4.46	.870
TOTAL SCALE	108	**4.39**	.719	86	**4.44**	.692
Scale (1=NOT at all TRUE of me, 5= VERY TRUE of me)						

Internship and Career Preparation

Career Preparation Skills- Students expressed confidence in the skills needed to obtain an internship or job, averaging 3.85 in fall and 3.75 in spring. They expressed the greatest confidence in their ability to construct a resume (M=4.0 in fall, M=3.91 in spring), receive and use feedback from others (M=4.16 in fall, M=3.90 in spring),prepare application materials for internships and jobs (M=3.84 in fall, M=3.77 in spring) and prepare for job interviews (M=4.05 in fall, M=3.86 in spring),

	Fall 2023			Spring 2024		
Career Preparation Skills	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**
Constructing a resume	19	4.00	.943	22	3.91	.971
Meeting-and-engaging-with-professionals-in-your-field	19	3.63	1.012	22	3.68	.995
Giving-feedback-to-others	19	3.58	1.017	22	3.50	1.144
Receiving-and-using-feedback-from-others	19	4.16	.898	21	3.90	1.044
Working-with-recruiters-or-career-services-related-to-potential-jobs	19	3.63	.955	22	3.50	1.225
Talking-with-faculty-and-others-about-potential-internships-or-job-opportunities	19	3.84	.958	22	3.68	1.211
Preparing-application-materials-for-an-internship-or-job	19	3.84	.958	22	3.77	1.110
Preparing-for-a-job-interview	19	4.05	.911	22	3.86	1.125
Preparing-for-a-presentation-you-will-do	19	3.95	.970	22	3.91	1.109
Delivering-a-strong-oral-presentation-with-confidence---	19	3.84	1.015	22	3.73	1.077
Learning-about-sources-for-potential-internships-or-jobs	19	3.89	.994	22	3.59	1.221
Applying-for-an-internship-or-job-opportunity---	19	4.00	.943	22	3.68	1.129
Interviewing-for-an-internship-or-job--	19	3.63	1.165	22	4.00	1.113
TOTAL SCALE	19	**3.85**	.716	22	**3.75**	.903
1=Not at all, 5=A great extent						

Faculty and Campus Lead Feedback

Sample - Faculty mentors and campus leads were also asked to provide feedback related to their involvement in TAPDINTO-STEM and observations of students at their campus. Feedback was received from 15 faculty of campus leads in fall and 27 in spring. The typical respondent identified as white (86.7% in fall, 77.8% in spring), non-Hispanic (80% in fall, 96.3% in spring) and did not disclose a disability (66% in fall, 51.9% in spring).

Faculty Characteristics		**Fall 2023 (n=15) N (%)**	**Spring 2024 (N=27) N (%)**
Hub	Islands	0	3 (11.1%)
	West Coast	1 (6.7%)	4 (14.8%)
	Mountain	7 (46.7%)	5 (18.5%)
	Midwest	1 (6.7%)	6 (22.2%)
	Northeast	2 (13.3%)	3 (11.1%)
	Southeast	3 (20%)	6 (22.2%)
	Not reported	1 (6.7%)	0
Gender/Preferred Pronoun	Female (she)	7 (46.7%)	11 (40.7%)
	Male (he)	7 (46.7%)	16 (59.3%)
	They	0	0
	Prefer not to answer	1 (6.7%)	0
Race	American Indian	0	0
	Asian or Pacific Islander	1 (6.7%)	7 (25.9%)
	Black or African American	0	1 (3.7%)
	Native Hawaiian/Pac Isl.	0	0
	White	13 (86.7%)	21 (77.8%)
	Prefer not to answer	1 (6.7%)	0
Ethnicity	Hispanic or Latino	2 (13.3%)	1 (3.7%)
	Not Hispanic or Latino	12 (80%)	26 (96.3%)
	Prefer not to answer	1 (6.7%)	0
Disclosed Disability	Yes	4 (26.7%)	10 (37%)
	No	10 (66.7%)	14 (51.9%)
	Prefer not to answer	1 (6.7%)	3 (11.1%)

Faculty Involvement

	Fall 2023 (n=15)	**Spring 2024**
Participated in monthly Bridge meetings	10 (66.7%)	23 (85.2%)
Participated in other project-related activities -Mentoring, Conferences, Campus events (recruitment, employer visits, etc.), online webinars, administrative tasks	7 (46.7%)	12 (44.4%)
Served as a mentor for TAPDINTO-STEM students	9 (60%)	

Please describe specific ways in which YOU have benefited from being a MENTOR in the mentoring process this past semester.	
Fall 2023 (n=7)	**Spring 2024 (n=15)**
-Learning more about individual student experiences. Gathering ideas for making my own classroom more accessible. -Learned more about the variety of student struggles -Learn from students lived experiences, heard strategies they feel would improve accessibility -It feels good to provide a good service for students. -I learned about the specific situations that our students have dealt with through their written cases. This has benefited me as a teacher and leader in our college. -I benefited from hearing the concerns of students and how best I can use their concerns in my teaching.. -1) Gaining awareness of issues faced by students with disabilities; 2) Being able to provide students with guidance and support; 3) Witnessing students grow and succeed.	-Understanding TAPDINTO students' needs has helped me get a perspective to be conscious of in my teaching duties and helped me build better relationships with students.. -My primary roll at the college is academic advising. -Seeing these students throughout their academic journey and seeing them achieve their goals is an absolute delight! -Learning about challenges faced by my Scholars and the opportunity to provide suppport knowledge about issues impacting neurodivergent STEM undergraduates; conference presentations with students; positive mentor-mentee relationships -It's my favorite part of my job. I really value my students' voices and feedback. I want them to be successful and feel supported by us. -It's helped me become a better instructor and support for students with disabilities in my classes -I learn the student's perspective and it help me shape my teaching and relationship expectation -I learn more about their perspective and how they are able to succeed in STEM and in their lives. -I have learned SO MUCH about students with disabilities and how they encounter our campus, our faculty, our courses, etc. This helps me better support them AND also all my students in my courses and beyond. -I better understand their issues. -gained empathy -Gain understanding of challenges. -building more relationships -Benefiting by being surrounded be others like me , being able to connect and talk to others who experience the same classes as me as well -Being a mentor helps to form the rapport with the students and be able to really listen to the issues that they are facing.

Mentoring Satisfaction – Overall, mentors were very generally satisfied with the mentoring experience over the past academic year. While just one mentor provided responses related to satisfaction, 14 did so in spring. In spring, mentors were most satisfied with the frequency of communication with mentees (M=4.36), their ability to help their mentee(s) (M=4.36) and the progress that their mentee(s) made over the semester (M=4.29).

	Fall 2023			Spring 2024		
Satisfaction with Mentoring	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**
How satisfied with:				14	4.00	.877
the number of times you communicated with your mentor each week?	1	4.0		14	4.36	.745
the length of the sessions?	1	4.0		14	3.86	.770
the progress your mentee(s) made this semester through mentoring?	1	4.0		14	4.29	.611
overall with the mentoring experiences you have had?	1	4.0		14	3.93	.829
your ability to help your mentee (s)?	1	4.0		14	4.36	.633
your relationship with your mentee(s)?	1	4.0		14	4.00	.877
TOTAL SCALE	1	**4.0**	0	14	**4.13**	.638
Scale (1=not at all, 5=A great extent)						

Mentoring Perceptions – Overall, mentors expressed very favorable perceptions of the mentoring process with the overall scale averages increasing from 3.94 in fall to 3.99 in spring. Mentors were most likely to agree that students were able to communicate their disability needs clearly, talk about life goals, mentoring helped students better understand STEM opportunities, increase their confidence to succeed in STEM courses and learn and grow as STEM students.

	Fall 2023			Spring 2024		
The mentoring experience has helped students to better organize their time	11	3.55	.688	23	3.65	.885
The mentoring experience has improved students' ability to communicate about their disability needs.	11	4.18	.751	23	4.26	.541
The mentoring experience has helped students better understand STEM opportunities.	11	4.09	.701	23	4.09	.733
The mentoring experience has increased student confidence that they will be successful in STEM courses.	11	4.18	.603	23	3.91	.668
Students are more interested in STEM classes because of mentoring.	11	3.45	.522	23	3.48	.846
During mentoring I have talked about career and life goals with students.	11	4.09	.701	22	4.27	.550
Students feel comfortable approaching mentors with any questions they have.	11	4.00	.632	22	4.09	.750
Mentoring has helped students learn and grow as STEM students.	11	4.00	.775	22	4.09	.684
I am satisfied with the overall mentoring experience.	11	3.82	.603	22	3.86	.941
I understand my mentees' struggles.	11	4.09	.539	22	4.09	.684
I think my mentees and I are a good match for each other.	11	4.00	.447	22	4.09	.868
The mentoring experience has encouraged students to push beyond what is comfortable or easy for them.	11	3.91	.701	22	4.05	.844
I encourage my mentees to share their thoughts and feelings.	11	4.00	.632	22	4.64	.658
Students have been able to get the information and resources they need. (Such as how to find resources they need, developing study skills etc.)	11	4.09	.539	22	4.27	.631
Mentoring has helped students solve problems they may have.	11	3.91	.539	22	4.05	.722
The mentoring experience has helped students make good decisions about their life.	11	3.82	.405	22	3.59	.734
Using social networks (such as Facebook, Twitter, email, Skype) helped me build a relationship with my mentees.	11	3.45	.820	22	2.64	1.399
I take an active part in the mentoring sessions by participating in activities and sharing my ideas and questions.	11	3.82	.405	21	4.24	.700
During mentoring I have felt respected and supported.	11	4.09	.831	22	4.32	.716
Students are able to get help through mentoring when they need it.	11	3.91	.539	22	4.14	.774
I listen carefully to my mentee's issues and concerns	11	4.18	.751	22	4.64	.581
My mentees feel like I provide constructive feedback to them.	11	4.18	.751	22	4.00	.816
TOTAL SCALE	11	**3.94**	.457	23	**3.99**	.574
Scale (SD, D, N, A, SA)						

Student Engagement

Program (Bridge) Engagement – Faculty and campus leads reported that students were actively engaged during the 2023-24 academic year, with the overall scale increasing from 4.02 to 4.06 and 7 of the 11 items averaging higher in spring. Over the past year, faculty most strongly agreed that students looked forward to meeting other students in the program (M=4.23 in fall and spring), Bridge and cluster meetings were worth their time (M=4.25 in fall, M=4.24 in spring), the Bridge meetings were valuable to students (M=4.15 in fall, M=4.28 in spring) and the time students spent in project activities was rewarding (M=4.15 in fall, M=4.16 in spring).

	Fall 2023			Spring 2024		
	N	**Mean**	**SD**	**N**	**Mean**	**SD**
Students actively participated in the monthly Bridge meetings.	13	4.00	.707	25	4.20	.577
The Bridge meetings are of great value to students.	13	4.15	.801	25	4.28	.843
Students look forward to meeting with other students in this project.	13	4.23	.832	26	4.23	.652
The topics addressed in large group Bridge meetings have been of great interest to students.	13	4.23	.832	25	4.16	.800
Students actively participate in the weekly cluster meetings.	13	3.54	.877	25	3.16	1.106
Meeting students in clusters have allowed for discussions of critical issues	13	3.62	.961	25	3.84	1.028
It is worth the time for students to participate in Bridge or Cluster meetings	12	4.25	.754	25	4.24	.926
Project activities (e.g., Bridge and cluster meetings) have focused on issues that will help students complete their degree.	13	3.92	.862	25	4.16	.624
Project activities (e.g., Bridge and cluster meetings) have focused on issues that will help students get an internship or job.	13	4.08	.862	25	3.96	.676
Students value the experiences they have had in this project	13	4.00	.707	26	4.19	.567
The time students spend related to project activities has been rewarding.	13	4.15	.899	25	4.16	.688
TOTAL SCALE	13	**4.02**	.627	26	**4.07**	.555
Scale (SD, D, N, A, SA)						

Student Belongingness

Faculty and Campus leads reported that students had a sense of belonging withing the TAPDINTO-STEM program with the overall scale averaging above 4 each semester and 8 of the 10 items above 4 each semester. More specifically, faculty and campus leads strongly believed that project leaders made students feel wanted and accepted (M=4.67 in fall, M=4.58 in spring), students felt accepted in the program (M=4.46 in fall, M=4.62 in spring), students were glad to be part of the program (M=4.46 in fall, M=4.35 in spring) and students felt comfortable in the program (M=4.31 in fall, M=4.35 in spring).

	Fall 2023			**Spring 2024**		
	N	**Mean**	**SD**	**N**	**Mean**	**SD**
Students have many friends in this program	13	3.69	.947	26	3.81	.634
Students feel comfortable in the program	13	4.31	.751	26	4.35	.562
The leaders in this program make students feel wanted and accepted.	12	4.67	.492	26	4.58	.504
Students feel like they are important in this program.	13	4.46	.776	26	4.27	.724
Students are glad to be part of this program.	13	4.46	.660	26	4.35	.629
Students are generally liked by other students in this program	13	4.15	.899	26	4.42	.643
Students feel like they are a part of this program	13	4.23	.725	26	4.35	.689
Students are committed to this program.	13	3.77	.927	26	3.81	1.02
Students are supported at this program.	13	4.23	.832	26	4.42	.643
Students are accepted at this program.	13	4.46	.776	26	4.62	.496
TOTAL SCALE	13	**4.24**	.658	26	**4.29**	.518
Scale (SD, D, N, A, SA)						

Awareness of and Participation in Project Activities -In spring, faculty and campus leads were asked to report the extent to which students were aware of and participated in project-related activities. This feedback is summarized in the table below. Moderate awareness and participation was reported, Students were reported to be most aware of college and university services and resources (services for SWD, career counseling and academic support services) as well as cluster meetings and TAPDINT)-STEM webinars. Students were reported to most actively involved in the college and university services as well as Bridge and cluster meetings.

	Awareness			**Participation**		
	N	**Mean**	**SD**	**N**	**Mean**	**SD**
Peer Mentoring (e.g. Bridge to Baccalaurete or Post-Baccalaureate Program)	21	3.71	1.35	20	3.60	1.19
Cluster meetings with other students	20	4.30	.801	20	3.55	1.32
National e-mentoring program	21	3.38	1.24	20	2.50	1.05
Internship opportunities	20	3.95	.887	20	3.35	.813
Workforce development (preparation) workshops and webinars	21	3.62	1.20	20	3.00	1.26
TAPDINTO-STEM webinars	21	4.00	1.09	21	3.00	.949
Guest speakers (often at Bridge meetings)	20	3.85	1.35	20	3.40	1.36
TAPDINTO-STEM Website	20	3.85	1.09	20	3.35	1.14
Discord server for TAPDINTO-STEM	20	3.45	1.47	20	2.55	1.32
Services and resources for students with disabilities	21	4.38	.740	21	4.14	.854
College or university career counseling services	21	4.33	.658	21	4.05	.973
Academic support services at your institution	21	4.33	.796	21	3.90	1.09
Workshops focused on wring and other academic skills	20	3.30	1.17	20	2.95	1.28
Graduate School and Career Fairs	21	3.67	1.16	21	3.52	1.08
TOTAL SCALE	23	**3.59**	.712	22	**3.35**	.762
Scale (1=Not at all, 5=A Great Extent)						

In addition to reporting student awareness and participation, faculty and campus leads were asked to respond to several open-ended questions related to project activities. These responses are listed below.

Please describe the activities you have been best prepared to implement effectively at your institution. – Eighteen faculty responded with comments. These comments are listed verbatim below. In reviewing these comments, the most prominent themes that emerged were related to the overall Bridge Model, workshops and webinars, university support services and graduate school and career preparation activities.

Responses
We have been best prepared to implement workshops, webinars and guest speaker at our institution. We also give students plenty of resources and opportunities both in our institution and outside. We have worked on organizing this information and giving students consistent opportunities so that they are aware of the many options they have for support and furthering their academic or professional career.
We have been best prepared to implement mental health supports, classroom accommodations, grad school support, and career counseling. We've also been very effective at working with staff and advisors on supporting students with disabilities.
Supporting students academically and emotionally
Student Mentoring and Support, small group sessions. Student Programming and Resource Workshops with other support services on campus. Career Workshops, Preparation for Career Fairs, and Internships. A channel of support and mentorship between students and Alliance Staff.
Sessions about adapting to job interviews and situations Looking for internships
Peer mentoring and tutoring services are the easiest to implement
Monthly meetings, seeing what the students need help with.
mentoring; guest speakers; campus and industry visits
Mentoring, workshops, guest speakers (though we have used video for this)
Mentoring, workshops and guest speakers
Mentoring Bridge Programs Tutoring
Mentoring (e.g., group and individual check-ins) and workshops on research and internships opportunities.
Interorganizational cooperation and speaking opportunities
Having students write and critique articles for a university newsletter on their perspectives and accomplishments and having students talk with faculty about career choices have been such activities.
Graduation school application/admission processes; Career services to students; Midwest Hub convening event.
Discussions with students about their experiences
Collaborative projects to improve our campus, icebreakers, group-think/brainstorming about improving our campus.
Advocacy/listening sessions with our Accessibility Resource Coordinator. Meetings with Career services. Meeting with faculty rea: grad school opportunities

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Please describe the activities that have been challenging to implement at your institution and what revisions you have had to make (if any). Sixteen comments were received in response to this question. The prominent issues raised in these comments were related to getting students to attend meeting and participate in project activities, time and scheduling issues and budget issues.

Responses
We've been having a hard time finding guest speakers that are either familiar with working with students with disabilities and scientists/ engineers who have a disability in STEM. Campus and industry visits are also difficult because of our location and the students have very packed schedules.
We wanted to put together a wellness event, but scheduling proved too difficult.
Travel related activities are the most difficult. Our students are willing to participate in activities on campus but traveling is more difficult.
Summer programs and cluster meetings have been challenging to implement given our residential campus and some of the scheduling challenges with mixed/hybrid degrees.
Maintaining student attendance and participation in certain activities and experiences remains a challenge.
It is nearly impossible to get our students to meet. They are never available all at one time between M-F 9-5.
industry visit, transition program
In the past student engagement, but this semester we've done really well as a campus with student retention, engagement, and belonging.
I am at the end of my second year (year 3 of the grant) and no money has been released to me for year two. So I have been reallocating resources to provide the students their stipends (I did this with permission). I have not been paid for year two and there is no money for extras. At the moment, the financial limitations are so significant that I can't implement anything that takes extra funds. I have found the financial issues with this program so challenging, that I am ready to quit. I still owe all of the students part of their stipends from this year. Hopefully my year two money will arrive shortly and I can pay students the rest of their promised stipend before school gets out in three weeks.
How to effectively bring all the participants at the same time.
Having students attending cluster meetings has been challenging due to students' busy conflicting schedules and the lack of guidance from mentors during the cluster meetings. We talked with the students during the last bridge meeting about this and suggested they make it low-key as just a social gathering if that is all that can be accomplished at any cluster meeting. For students who plan to be in the program this coming fall 2024 term we suggested each student create and host a certain number of cluster meetings and then students can attend a certain number of them at convenient times for them. with optional attendance at each one (as and that each of them implement
getting students to turn up to discussions and meetings.
getting students to do cluster activities
Finding adequate time to implement set goals due to other competing institutional programs
bridge meetings, unfortunately the primary issue is time to attend meetings as students (as well as myself) in program here work jobs or are at other classes during the times we run bridge meetings.
Booking guest speakers or identifying topics of interest to the students in the program.

Please describe activities, services or resources that you have found to be effective in helping TAPDINTO-STEM students succeed in their current degree program. Fourteen (14) comments were made in relation resources or services aimed at helping students complete their degree. These comments were focused on the helpfulness of the overall Bridge Mode)Bridge and cluster meetings and mentoring), personnel (faculty, staff and peers), campus resources and services (e.g. SWD services, mental health services) and communication and discussion (e.g., Discord, emails).

Responses
We send out weekly resource emails and posts in our Discord server which students have actively participated in and found extremely helpful. They also have discussed many different topics surrounding getting a degree and consulted in each other to gain study tips and networking resources to make their degree pursuit easier.
We have setup our communications with students in Canvas. This resource has helped streamline data to students in a manner they are both familiar with and utilize regularly.
The most effective resource has been the other students in the program. Most resources specifically for students with disabilities are too generic to be useful and resources that are not targeted at SWD lack nuance. For other resources such as internships, resumes, and skill building, it's been a mixture of listservs and other college websites.
The Midwest Hub convening @ Little Priest Tribal College is definitely the best part of this year's activity. Students loved it! Peer mentoring process is great!
Students Disabilities Service ... good here Local funding for UT internships
peer supports have been the most effective, but we have also been able to connect students to other faculty across campus that has helped them feel more connected.
One another and the faculty mentors!
nothing specific comes to mind.
monthly meetings; individual mentorship; community and relationship building
Hub meetings/ideas. I have also made use of LimeConnect and some other groups for videos.
Food, but staff have to pay for it. It would be nice if we had a budget for this.
Coming to bridge meetings and discussing their struggles and challenges in their program has been helpful in this regard.
Career Services workshop, in which students engaged with a career coach to learn about resume writing and interviews. An introduction to Access Services, where students learned how to apply for accommodations and how that office can support them. Mental health and counseling services, a workshop dedicated to supporting students who are neurodivergent and how they can receive support and guidance from a counselor if needed. We also did a financial aid workshop, where students were led in a conversation with a financial aid wellness specialist to talk about budgeting, scholarships, and how to apply for assistance.
Bridge program and cluster meetings
Being available to listen to their needs presenting opportunities for them at meeting

Please describe activities, services or resources that you have found to be useful in helping TAPDINTO-STEM students prepare for STEM workforce or an advanced degree. Thirteen (13) comments were offered related to services or resources that have helped students prepare for the STEM workforce or an advanced degree. These comments were focused on campus resources (e,g, Career Services), invited speakers from the profession, mock interviews, sharing information related to internships and jobs and Graduate school or career workshops.

Responses
We send out weekly resource emails and posts in our Discord server which students have actively participated in and found extremely helpful. These posts include internship or job opportunities and have information about disability programs in other institutions. We also hold meeting regularly which are hosted by disabled STEM professionals who share their experiences and help to give students insight into their next steps after education.
We have hosted partner university TAPINTO personnel for talks with the students and invited locale business (STEM related) to speak with the students. Students seem to enjoy this.
Transition support, building opportunities spreadsheet, working with students on the neurodiversity student club, graduate school application.
Sponsoring them at meetings and conferences related to their careers Encouraging them to lead research experience
Speakers about job applicants
Our STEM director and counselors have been really effective in giving guidance as well as internet career and school resources. YouTube day in the life of a scientist videos have been helpful for students to see what careers are out there and what that looks like.
nothing specific comes to mind.
Not sure I have enough experience to answer this question. We've only been going for 1.5 years, and have only had our first students graduate this week (May 2024).
I have held resume writing and job hunting sessions.
I am not aware of any resources available that is provided from this program to help us prepare students for that transition.
Having students interview faculty on career options and writing up summaries of their interviews has been helpful in this regard.
Conducting faculty interviews has been a helpful way for students to be prepared for conducting research or learning about job opportunities.
Career Services meeting was really productive.
career development and industry presentations; sharing research and internship opportunities; resume review; letters of recommendation
Bridge program and cluster meetings
Accessibility Services, Career Services, Financial Wellness, and Mental Health and Counseling.

Perceived Student Outcomes

Faculty reported observing very positive outcomes in students over the year, averaging 3.68 in fall and 3.42 in spring. Over the past year, student outcomes reported to the greatest extent included learning more about valuable resources at the institution, learning more about career opportunities in the field, developing closer relationships with faculty, developing collaboration skills and increasing commitment and confidence that they will complete their degree.

	Fall 2023			Spring 2024		
	N	**Mean**	**SD**	**N**	**Mean**	**SD**
Increased their social (peer) support network	13	4.08	.862	25	3.80	.957
Learned more about resources available to me at my institution	13	4.08	.641	25	4.20	.645
Improved time management skills	13	3.54	.776	25	3.12	1.05
Learned more about career opportunities in the field	13	4.15	.899	25	3.96	.611
Developed closer relationships with faculty	13	4.00	.707	25	4.00	.957
Gained valuable knowledge related to their academic major	13	3.69	.855	25	3.40	1.08
Learned more about research in the field	13	3.69	.855	25	3.44	.961
Improved their writing skills	13	2.92	1.19	25	2.44	1.19
Learned more about Graduate School opportunities	13	3.85	.801	25	3.44	1.16
Improved their ability to conduct literature reviews.	13	2.54	1.27	24	2.29	1.16
Learned and improved their ability to write research proposals	13	2.62	1.33	25	2.24	1.20
Improved their teamwork skills	13	3.54	1.51	24	3.33	.963
Improved their leadership skills	13	4.00	1.08	25	3.48	1.01
Improved their ability to effectively collaborate with peers	13	4.15	.987	25	3.84	.943
Increased their commitment to completing my degree	13	4.08	.862	25	3.84	.746
Become better prepared for a potential internship	13	3.92	.760	25	3.76	.663
Improved their academic and study skills	13	3.85	.689	25	3.48	.963
Become more interested in a study abroad experience	13	2.92	1.04	25	2.60	1.08
Are better able to help (mentor) others	13	4.00	.913	25	3.80	1.00
Are more confident that I will complete their degree program	13	4.00	.816	25	3.84	.746
TOTAL SCALE	13	**3.68**	.691	25	**3.42**	.707
Scale (1=Not at all, 5=A Great Extent)						

Summary of Internal Evaluation Findings

Key Findings related to Project Objectives – Two of the three project objectives were focused on students. Some key findings related to these objectives are listed below. Other findings related to key components of the internal evaluation follow.

Objective 1 - Students reported outcomes related to retention and eventual degree completion. More specifically, students reported an increased commitment to completing their degree (M=3.67 in fall and M= 3.82 in spring) and increased confidence to complete their degree (M=3.59 in fall and M=3.92 in spring). In addition, they indicated strong persistence to continue taking courses in their major discipline and earn their degree in their current major (M=4.77 in fall and M=4.74 in spring). Faculty and campus leads also reported that students had increased their commitment and confidence that they would complete their degree with these items averaging 4 or above in fall and 3.84 in spring.

Objective 2 – TAPDINTO-STEM students also reported being better prepared for the transition to the STEM field. Students reported learning more about sources for jobs and internships (M=3.89 in fall, M= 3.59 in spring), being better able to prepare application materials for internships and jobs (M=3.84 in fall, M=3.77being more confident in their ability to apply for internship or job opportunities (M=4.0 in fall, M=3.68 in spring) and better prepared for internships (M=3.42 in fall and M= 3.57 in spring. In addition, TAPDINTO-STEM students indicated being better prepared for job interviews (M=4.05 in fall, M= 3.86 in spring), having a strong intention to get a job in their current field (M=4.54 in fall, M=4.58 in spring). could see themselves in the field for quite some time (M=4.46 in fall, M=4.43 in spring) and planned to devote their career to their current discipline (M=4.42 in fall, M=4.46 in spring).